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IMMUNITY AND HEREDITY.

BY M. H. HAYES, F.R.C.V.S.

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Immunity.

IMMUNITY is the power which an individual or a species has to resist the attack of a disease. It may be racial, individual, or acquired; and may be absolute or comparative. For instance, horses possess racial immunity against the scarlet fever of man and the pleuro-pneumonia of cattle. Men are immune from strangles; and ruminants, from glanders. Among every species of animal, we find individuals which are more or less refractory to the inroads of a disease to which their fellows show marked susceptibility. The man, horse, or ox which has had one attack, respectively, of small-pox, strangles, or pleuro-pneumonia, will have acquired more or less immunity from a second attack.

The tenacity or hardness of the red corpuscles of the ox seems to be the cause of the comparative immunity of that animal to surra. Lingard, has, however, succeeded in inoculating bullocks with the virus of surra. These animals suffered no ill effects from the experiment; although surra, under all ordinary circumstances, is invariably fatal to horses.

As possessors of comparative immunity, I may cite Algerian sheep, which are refractory to anthrax, when inoculated in the ordinary way; but prove susceptible to it when the dose of the virus is largely increased.

Dogs rarely contract tetanus; horses, on the other hand, are very susceptible to it.

The comparative immunity of the carnivora against actinomycosis is a subject upon which the requirements of space prevents me from dwelling. The immunity of fowl

against anthrax appears to be due to their high internal temperature (about 107.5° F.); for Pasteur has proved that if a fowl be inoculated with anthrax, and is then placed and kept in water at a temperature of 77° F., so as to considerably reduce its internal heat, it will die of anthrax in about a day-and-a-half.

The nature of the lesions set up in the tissues by certain diseases, greatly affects comparative resistance. Thus, in a man who has been inoculated with anthrax, the virus is more or less arrested at the seat of inoculation in the malignant pustule which forms at that spot; but in the horse it spreads, apparently unchecked, throughout his entire body. Hence, anthrax is far more fatal, and runs a much more rapid course, in horses than in men.

In affording an explanation for the action of the system in resisting the attack of disease germs, pathologists, as a rule, take one of two sides, namely, that of those who hold the theory that protection is obtained by the serum of the blood, or that of those who, with Metchnikoff, award the credit to the leucocytes and cells of the part. Perhaps the safer plan would be to regard both theories as partly correct. Nuttal, Buchner, and others have shown that the serum of the blood without the presence of leucocytes, has a well-marked germicidal action, which, according to von Fodor, is in accordance with the immunity of the particular animal. This observer showed that the germicidal power of the serum decreased with the temperature, and that it is strengthened by the addition of a drug which, like carbonate of potash or carbonate of soda, increases the alkalinity of the blood. We know that in inflammation, the leucocytes and the cells of the injured part absorb and digest dead and effete matter. (For further information on this subject, I may refer my readers to the last (1895) edition of Erichsen's Surgery). Metchnikoff has proved that the leucocytes and these cells, both of which he classes under the heading of *phagocytes*, perform a like office in contagious diseases by absorbing into their substance and by digesting the attacking microbes. I may point out that in the lesions of malignant pustule of man, of tubercle, of glanders, and of all other inflammatory processes, there is always collected an immense number of leucocytes, which attempt the removal of microbes or of dead and deleterious substances. The followers of Nuttal, with some show of reason, assert that the *rôle* of the phagocytes begins only after the invading microbes have been destroyed or rendered inert by the blood serum. They, therefore, regard the phagocytes

only as scavengers, and not as protectors of the tissues. Whichever view we take, we shall be equally impressed with the necessity of supporting the vitality of the system, when combatting the attack of an infectious disease.

Acquired immunity is never absolute. Thus, although one attack of smallpox or one of strangles almost always confers immunity from a second attack in, respectively, man or horse, exceptions are now and then met with. This immunity lasts a long time in some diseases; only a short one in others; and may have even a negative influence. In malarial fever, one attack, for instance, increases the susceptibility to a second attack.

In those diseases in which one attack has a well-marked power of conferring subsequent immunity, protection, according to Metchnikoff, is acquired by the previous training in devouring microbes which the leucocytes have undergone. "If we inoculate the virus of anthrax, for example, under the skin of an ordinary rabbit and of a rabbit which has been protected by vaccination, behold what we may observe at the respective seats of inoculation. In the ordinary rabbit the microbes multiply rapidly. The swollen part is full of watery fluid, and is poor in cells. Little by little the swelling extends; the neighbouring ganglions enlarge; and the infection becomes generalised. In the protected rabbit, on the contrary, the bacilli multiply at first, but soon the leucocytes arrive in such great numbers that the microbes are taken and killed; the fluid in the swelling, instead of being clear, becomes thick, cells are abundant in it, the bacilli disappear, the disease does not extend, and it becomes cured. (*Cadéac.*)

I may point out that after an attack of intermittent fever in man, the protozoa which give rise to the disease may be found for a long time, possibly years, in the blood, and do not appear to suffer from the attacks of the leucocytes. It would therefore seem that, in this case, one invasion, by filling the blood with these animalculæ in a living state, would confer susceptibility, not immunity, to a second attack.

Immunity may be acquired by the paralysing influence which the material formed in the tissues by the disease germs has on these microbes. Bouchard has proved this in the cultivation of the bacillus of blue pus; and Raulin in that of the *aspergillus niger*. As a familiar instance, Cadéac cites the experiment of putting yeast in a solution of sugar, which mixture will produce carbonic acid and alcohol. After a

certain time the fermentation will stop. If we add sugar to the liquid the yeast will recommence growing; but the fermentation will soon again stop, and will not begin afresh even if we add more sugar. If, on the contrary, we add water, the fermentation will commence again; and will also do so, if by heating the liquid, we drive off the alcohol which has been formed. In the first case, the effect of the water was not to add to the materials necessary for the nutrition of the ferment, but to dilute the matters formed by the yeast, of which alcohol was the principal. In the second case, the heat expelled the alcohol or considerably diminished it, and the fermentation commenced anew. Here, the alcohol has a poisonous or paralysing effect on the yeast which produced it. This theory may serve to explain the fact that certain diseases, like contagious pleuro-pneumonia and pink-eye, run a definite course, at the end of which, if the animal has survived the severity of the symptoms, the disease will disappear. In this class of diseases, the acquired immunity will naturally be comparatively short-lived. The material which Pasteur employed for inoculation as a preventive to rabies, and which is obtained from the spinal cord of the rabbit, may act in the same manner, by checking the development of the microbe that is supposed to produce rabies. Up to the present, no plausible theory has been put forward to explain the fact that one attack of certain diseases, strangles and anthrax for instance, confers, as a rule, permanent immunity.

Behring and Kitasato have shown that the serum of animals which have had respectively diphtheria or tetanus, and the serum of animals which are naturally immune to these respective diseases, are antidotes to these complaints. Some of the most recent experiments in this branch of science are those of T. D. Fraser, who has made animals immune against poisonous snake-bite by repeated injections of the venom, the dose of which was at first from one-tenth to one-half the ordinary lethal amount, and was gradually increased, without injuriously affecting the patient, to five or six times the quantity capable of killing under normal circumstances. He further found that the serum of the blood of an immunised animal was a powerful antidote to the poison. We have no exact knowledge respecting the manner in which such immunity is conferred.

The attenuated virus of certain diseases, rabies and anthrax for instance, is a preventive vaccine; in other words, the inoculated animals acquire immunity. We know very little indeed respecting the manner in which these agents act. It

seems probable that this immunity is obtained only in those diseases the symptoms of which are due to the poison formed by the bacteria peculiar to the disease in question. We may have here, as suggested by Metchnikoff, cases of training of the leucocytes.

Heredity.

Heredity is the appearance, in descendants, of like of parents or of ancestors. This production of like is limited to parental or ancestral function, and, consequently, cannot begin after birth. For instance, if a foal got mange from its dam or sire, such mange could not be called hereditary. Heredity in disease is manifested by parental or ancestral tendency or by direct transmission from a parent.

Hereditary tendency.—The ovum of the female on being fecundated by a spermatazoon of the male, becomes a living being gifted with the mental and physical properties of both its parents, probably in varying proportions, and consequently contains those of its paternal and maternal ancestors in proportions which decrease according to the remoteness of the descent. These hereditary properties, even when decreased to an almost infinitely small fraction by the successive division of generations, are capable of becoming stimulated into development by surroundings or by forces unknown to us. Thus, after a period of possibly 100,000 generations, a single-toed mare gives birth to a foal which has one or more feet resembling those of its three-toed ancestor, the *hipparion gracile*, or other nearly allied fossil horse. Under ordinary circumstances, the nearer the ancestor the stronger is the influence of heredity; although in no case, speaking within reasonable limits, can such influence be entirely effaced. The more nearly related dam and sire are, the larger is the proportion in the offspring of properties which they both derive from a common parent or ancestor. Hence, consanguinity is a fruitful cause of excessively-developed heredity defects. I may point out that the union of a brother and sister would, other things being equal, be twice as close a case of incest as one between a parent and its offspring.

Acquired characteristics, mental as well as physical, may become hereditary, as, for instance, "faintheartedness" from "punishment" in racing, roaring, and navicular disease.

Direct transmission.—This agency is usually centred in the dam, whose blood may carry the microbes of infectious diseases, like anthrax, glanders, tubercle, and strangles, or the eggs of worms to the fœtus.

THE INFLUENCE OF A PREVIOUS SIRE.—AN APPEAL.

BY O. CHARNOCK BRADLEY, NEW VETERINARY COLLEGE, EDINBURGH.

THE theory that a sire may influence future progeny not begotten by him may be said to be classical, and is held by most, if not all, veterinarians and breeders.

It is a matter of common experience to hear a breeder—and perhaps more commonly a dog fancier—say that a certain female has been spoiled for breeding purposes by having intercourse with a badly-bred or mongrel male. The annual pecuniary loss from this source may be estimated as considerable.

The history of this theory dates back some eighty years, and the instance most commonly quoted in illustration of it, is that of Lord Morton's chestnut mare, which, in 1815, was covered by a quagga, subsequently giving birth to a hybrid which showed distinct external evidence of its alien ancestor in the black bars which were present on its legs and shoulders, and in the shape of its head, which resembled very closely that of a quagga. In 1817, 1818, and 1821 this chestnut mare was served by a black Arabian horse, with the result that three foals were born, all of them showing the influence of the quagga "in the possession of body stripes and bars on the legs."

In 1849 James M'Gillivray, a veterinary surgeon of Huntly, wrote a paper on the influence of a previous sire, which created a considerable amount of interest, and in which he propounded a theory to explain the phenomenon. M'Gillivray's theory, however, was one which did not meet with the full and unreserved acceptance of scientists, as it appeared that he was labouring under the delusion that the fœtal and maternal bloods mixed with each other; this, however, was probably not the idea he wished to convey.

Professor Harvey, of Aberdeen, happening to see M'Gillivray's communication, took up the subject and brought it prominently before the scientific public in a series of extremely able and interesting essays which he contributed to the Edinburgh *Monthly Journal of Medical Science* and other medical periodicals; he subsequently collected these essays and published them in book form under the title of "On the Fœtus in Utero," with an explanatory sub-title, "As inoculating the maternal with the peculiarities of the paternal organism." To this book I would refer such of my readers as are anxious to obtain a fuller account of this theory.

Of late years little seems to have been done in the shape of collecting evidence to clear up any doubts that may exist as to the tenability of the theory.

In the *Journal of Anatomy and Physiology* for January of this year, Dr. Bell, of Dunfermline, has, however, made an attack, and this attack has led to the writing of the present article and the making of an appeal to those members of the veterinary profession who hold any opinion upon the subject supported by actual experience.

Dr. Bell, after reviewing the present position of the theory, says:—"I cannot believe that one sire can influence subsequent progeny unless the most absolute proof be forthcoming, or instances are quoted of the most reliable nature, where the evidence is so indisputable that it cannot be gainsaid."

Surely no one is more able, or placed in better circumstances, to bring forward such proof, and such instances, than the veterinary surgeon, who will bring a scientifically-balanced mind to bear upon such cases, or reported cases, as may come under his notice in the daily routine of practice. My purpose in writing this, therefore, is to ask, nay to entreat, my professional brethren to give me their views upon this matter; stating in precise terms whether they do or do not believe that subsequent progeny may be influenced by a previous sire, and, wherever practicable, quoting cases which have come under their personal notice (not cases of hearsay) and which have led them to support or refute the theory. I know that response to this appeal will mean the expenditure of both valuable time and much patience, but I think that if sufficient evidence be forthcoming to settle the question either one way or the other, the end will amply justify the means. For myself, I promise, should sufficient response be made, to receive the evidence and give it forth again to the profession in its collected form, and I feel confident that by this means a very valuable contribution might be made to our knowledge of the laws governing breeding.

NOTES ON TWO CASES.

BY E. PLANT, M.R.C.V.S., HOLMES CHAPEL, CHESHIRE.

ON November the 26th, 1895, I was called, about 1 a.m., to see an aged gelding, which the messenger told me was choked. Thinking, no doubt, the message was correct, I took with me the probang, balling iron, hypodermic syringe, also ol. lini. and chloroform. As the distance was only one

mile, I walked. Upon my arrival I found the message to be correct. The obstruction (either a piece of carrot or turnip, as the horse had been having both cut into pieces, but probably the former from the shape, which was round, about 2½ inches in diameter, and ½ inch thick), was situated at the lower third of the cervical portion of the œsophagus. The symptoms I need hardly describe, from the fact that the obstruction could be seen as well as felt, except that there was repeated gulping and frequent attempts at vomition, which were almost painful to witness. The treatment consisted of administering ol. lini. and chloroform, but little, if any, passed the obstruction, being returned by the nostrils. I then hand-rubbed the neck over the obstruction for a considerable time, alternately administering a mouthful of the oil and chloroform, but without the desired effect. I next injected atropine into the œsophagus over the obstruction, and waited a few minutes for the result, which I thought would be dilatation of the muscular fibres of the œsophagus, and then by again applying the hand-rubbing with pressure, the obstruction might pass on to its proper destination. However, this proved of no avail also. I then decided to pass the probang; and this operation is what caused me to relate this case, from the fact that I performed it standing. My method of procedure was as follows:—Only having two youths and one man to assist me, and having no casting tackle with me, to say nothing of the very small hours of the morning, I had the horse turned round in the box, with his head to the door. I then put a twitch on the off ear, put the balling iron in his mouth, and had the other ear held also, this being done to keep the head in as straight a line as possible. I then proceeded to pass the probang, having previously warmed and oiled it. I had not much difficulty in passing it as far as the obstruction, but now came the difficulty. Having to use a considerable amount of pressure the horse began to be restive; however, I persevered until I felt it move, and then I kept it going until I had only about one foot of the probang left out, then I withdrew it, thinking it would pass the remainder of the journey without any aid. I had him turned round again and waited a few minutes to see if all was right, but to my sorrow the gulping and attempts at vomition returned as severe as before. Nothing daunted, I had him turned to the door again, and went through the same process, this time passing the probang to the end. When I withdrew it I was not a little amazed to see some

blood on it, which I quickly removed, although I felt somewhat confident that I had done no serious damage. I now drenched him with a few mouthfuls of water, which he easily swallowed, made him as comfortable as possible, and left him for two hours. On seeing him again I found him very dull and heavy, most of which I attributed to the long journey which he had done that day. Seeing that I could do no more I left him until the morning. Upon my visit next morning I found his pulse and temperature normal, and that he had partaken of a bucketful of gruel. I ordered a sloppy diet until I saw him again next day. He was then to all external appearances in his usual state of health. I ordered the slop diet to be continued, and in two days the horse was at work again and has since been in a perfect state of health. As I mentioned before, the reason why I relate this case is that passing the probang (and the one I used was a very large one) in the horse whilst standing is a very rare thing, and as the case terminated successfully I thought perhaps it might interest some of the readers of the VETERINARY JOURNAL.

A Peculiar Case.

The subject of the above case was a cow which had suddenly hung back on the chain after being milked in the evening. She was, however, immediately released, placed in a loose box, a messenger being sent off for me. Upon asking him what she was like, he told me the above, and also that, after putting her in the loose box, she began to chew the manger, and that a copious flow of saliva came from the mouth. Thinking that there was some brain affection, and not being able to go straight away to see her, I sent the following draught, to be given at once in a pint and a-half of cold water:—Chloral Hydras., Pot. Brom. $\frac{\text{ss}}{\text{aa}}$ 1 oz., Aqua ad. 8 ozs. Upon my arrival I found the above symptoms to be correct, except that now she was chewing the iron ring of the rack chain. I found her temperature to be 104·2 Fahr., pulse 60, eyes staring and prominent. I then examined her mouth thoroughly, thinking, perhaps, there might be some foreign body giving rise to the irritation; however, this was not so. Soon after this she began biting her off fore arm, and now I must confess I was a little puzzled, from the fact that a few months ago a rabid dog had bitten several cows in the adjoining field to which this one had been grazing at that time, the dog being afterwards destroyed, and declared to be suffering from rabies. I began to think that my case

was one of rabies in the premonitory stages. However, I gave her the benefit of the doubt; and for the time being, assuming the case to be one of brain affection, I decided to bleed her. This I succeeded in doing with a little difficulty, considering I had to do all myself, as no one else would go near her. This done, I left her for two hours. Upon going to see her again I found her chewing the door. Having got her away, I opened it, and found her much the same. She had almost bitten all the skin off a portion of the forearm. I told the owner I could do no more that night, so decided to leave her, which we did after having barricaded the door, and see what the morning would bring forth. When I arrived at the place next morning the owner met me in the yard with a beaming smile on his face, which I was sure indicated improvement in the cow, and told me that when he went to see her that morning she was chewing her cud, had given a can full of milk, and eaten a fair breakfast. I saw her again on the 13th, and she was in the usual state of health. Now, I should like to ask some more experienced reader, or readers, of the VETERINARY JOURNAL, what in his or their opinions was the true nature of this case? For I must confess that I am at a loss, never having seen nor heard of a similar case before.

ON A CASE OF MULTIPLE EXTRA-UTERINE GESTATION WITH OSSEOUS EMBOLISM OF THE PULMONARY ARTERY.*

BY JAMES SPREULL, M.R.C.V.S., ALFORT.

ON the 30th December last there was brought to the consultation of the Alfort Veterinary School a small pointer bitch, about eight or nine years old, which for the last fortnight had evinced much difficulty in micturating. At the same time her belly had increased in volume, especially towards the inferior parts, simulating ascites. The appetite had disappeared and the animal was rapidly becoming thin.

I examined the patient carefully and was not long in discovering in the mammary region, a little outside of the median line and in front of the groin, a cicatrix with indurated and nodulous borders which, in my opinion, resulted from the removal of a neoplasm some time before.

Besides, palpation showed the existence on the posterior

* Translated from the French of Victor Drouin, Assistant Professor at the Alfort Veterinary School, France.

surface of the liver, towards the right hypochondriac region, of hard tumours adherent to the organ, whilst other still harder new formations seemed to float in the peritoneal cavity.

These symptoms seemed to me perfectly concordant and demonstrative; the cicatrix, ascites, tumours, rapid wasting and the age of the patient, all seemed to converge towards the diagnosis: cancer of the liver, or rather cancerous generalisation in the abdomen. And I attributed the retention of the urine to the presence of a neoplasmic mass upon the neck of the bladder or upon the organ itself.

When questioned, the owner declared that he had had the bitch in his possession for nearly two years. Bought from an English breeder, she presented at the time of purchase the already mentioned cicatrix. The breeder had even said that she had been spayed.

But about a year after the sale she became suddenly in heat; she was lined, her belly enlarged, and she presented all the appearances of normal pregnancy. Nevertheless, the second month elapsed, then a third, without anything being seen to appear; on the contrary, everything regained its natural state and the belly diminished in volume. The owner then thought that he had been mistaken, and that all the more readily since he had believed the animal was spayed.

It was not till a year after this incident that symptoms were presented anew, and that I was now consulted. What had happened was forgotten, and consequently all this was not reported to me. It is, however, very probable that the information would hardly have influenced my diagnosis.

As I have already said, I diagnosed the case as one of generalised cancer, and did not hesitate in advising slaughter, which was done accordingly.

The autopsy had its surprises in store for me.

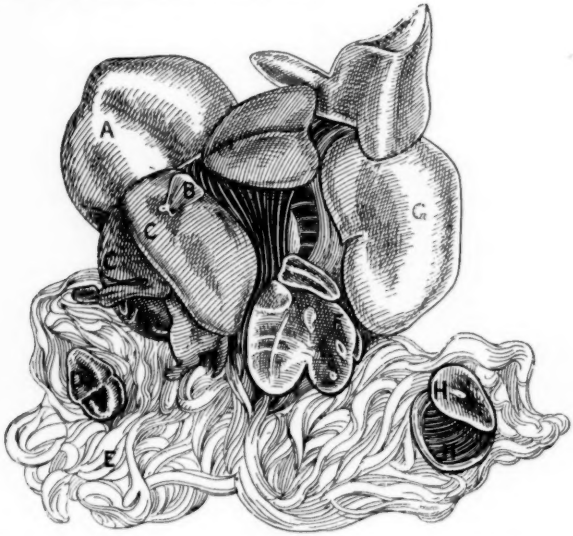
Autopsy.—In the abdominal cavity I first found a goodly number of small bodies, either floating free or adherent by epiploic bands to different organs. A very short examination sufficed to recognise in them the bones of a fully-developed fœtus. Upon the liver a perfectly developed scapula adherent to Glisson's capsule, elsewhere there were portion of limbs, etc.; then larger bodies, which represented calcified fœtuses, heads, chests, and vertebral columns, in fact, beautiful examples of litho-pædium.

Lastly, adherent to the posterior surface of the liver, two fibrous capsules, containing two other fœtuses perfectly developed and preserved in all their entirety; all the soft

structures were in their proper place; the skin was intact and covered with fawn-coloured hair, which adhered in some places to the envelopes.

But no part of a placenta or umbilical cord was present.

The womb had only one horn with its corresponding ovary, the other had disappeared. Finally, this remaining horn was closed at its junction with the womb, and perforated at some distance from it.



(*a*) Right lobe, (*b*) Scapula, (*c*) Fœtus and its capsule, (*d*) Fœtal head, (*e*) Omentum, (*f*) Fœtus (*g*) Left lobe, (*h*) Fœtal head and thorax.

This photograph, taken from a drawing in chalk, represents the liver, attached to the posterior surface of which are seen two fœtuses and a scapula, whilst parts of two others are seen entangled within the folds of the omentum.

The examination of the lung was not less interesting. When separating the auricle from the ventricle, I felt a resistant body, and when the separation was complete I saw emerge from the peripheral end of the pulmonary artery a bone $\frac{1}{3}$ inch long and $\frac{1}{1\frac{1}{2}}$ inch thick, strongly adherent by fibrous bands to the vessel wall.

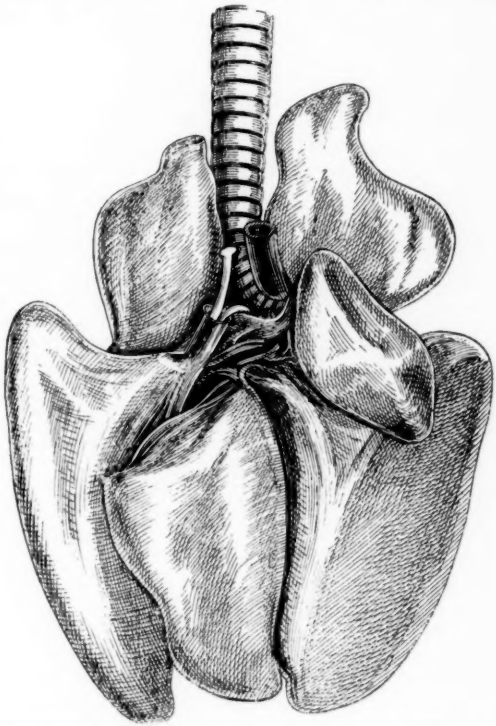
How can all these anomalies be explained?—This is probably how it came about.

Before purchase an attempt had been made to spay the bitch. One ovary with the horn of the same side had been

removed, and it was through the abdominal wound that this operation had been performed.

Eventually the bitch was lined when in the possession of her new master, the remaining ovary furnished the elements of fecundation, and gestation began in the womb.

But at the time of parturition the cornu was torn and the six fœtuses fell into the peritoneal cavity, to fix themselves,



This photograph was taken from a drawing in chalk, and represents the lungs seen on their inferior surface; the bony embolus is seen in the pulmonary artery, and to the right of it is the aorta.

some upon the liver, others upon the omentum. The first, rapidly surrounded with a fibrous capsule, were preserved intact; the others were not long in calcifying in their trunks, whilst the branches of the limbs became detached and remained free in the abdomen.

Finally, the pulmonary embolism is easily explained. We know with what facility the bones of ectopic fœtuses pierce the wall of the bowel or the abdomen; it is therefore not surprising if one of these bones had perforated slowly into the posterior vena cava. Drawn by the blood stream into the right auricle, it passed into the right ventricle, from which it was expelled through the pulmonary artery; the narrowing of the vessel preventing its further progress.

Again it is not without interest to remark that the presence of these ectopic fœtuses for a year in the abdominal cavity did not at all injure the general state of health, much less the existence of a voluminous osseous fragment in the pulmonary trunk.

The disease from which the bitch actually suffered was acute cystitis, of quite recent origin.

SUBCUTANEOUS EMPHYSEMA.

BY HENRY SNARRY, M.R.C.V.S., YORK.

THE first case I remember was in the year 1877, whilst practising in Selby.

The order was to go to a cow with supposed felon. On arrival, the animal was dull, off her food, and somewhat stiff when she moved or turned; there was something about her I did not like, and which I cannot explain now, as I made no notes, though I cannot forget the case altogether. I was mostly struck by noticing a firm and movable enlargement (size of a billiard ball) under the skin on the right side of the chest. I manipulated it, and moved it under the skin in different directions for several inches. I was inclined to think she had had a blow.

The next day she appeared no better, but swollen on the side where the enlargement was, and which on manipulation crackled.

The case went on a few days, and the emphysema increased until it extended over the greater part of the body. In some parts it projected in large bullæ (the skin distended 4 to 6 inches from the body, and about 2 feet in circumference).

I lanced several of the large swellings and pressed out as much gas as I could. The breathing became affected, short and catching, the air being expelled by a double effort exactly as seen in broken wind.

I felt certain, and expressed my opinion to Mr. Wright (unqualified practitioner, whose practice I was trying), that

the peculiar breathing was consequent upon the formation of gas in the interlobular tissue of the lungs, as it was under the skin, and thus obstructing the natural elastic recoil of healthy expiration, and calling in the aid of the abdominal muscles. The animal died. The treatment was a cathartic, chlorate of potass, turpentine.

Post-mortem showed the lungs healthy in colour, but very large and light. The interlobular tissue very distinctly showed the presence of gas and the more or less separation of the lobules.

The next case I saw was on February 17th, 1880, at Haxby.

It was a cow which had been attended by a quack for several days.

When sent for I was told she was off her food, dull, head down, breathing quick, and grunting.

I found her as stated, and that she was near calving. There was no unhealthy sound in the chest.

After a few days I noticed emphysema on the loins (first the right). It gradually extended along the withers, sides, udder, thighs, &c. Sometimes it would go down in places and be larger in others.

She calved on the 20th February, and it seemed to weaken her and throw her back a good deal.

For the first two days I gave her ammonia carb., nux vomica, pot. nit. and gentian, and when the fever was high and breathing bad I gave aconite and ether. I used mild liniment to swellings, as matter of form; on recovering, tonics —iron, carb. ammonia, etc.

The last visit was March 12th. She eventually did well, and got quite fresh and fat.

Next case. (Copy of a letter from my father, April 5th, 1880):—

"I have a case of a cow at Thorpbasset, dropped day after calving. When I saw her at night, on April 1st, she was stupefied. I ordered her a bottle of whiskey at twice. Saw her next day; a great deal better.

"I gave her ether and nux vomica, 2 drs. every four hours (6 doses). Next day, was much better; stood on her fore legs, but could not get up. Passed fæces twice.

"I then sent her 5 drs aloes with ½ oz. oil juniper. Saw her this morning, and found her swollen all over, her *head, and neck, back and sides*, crackled under the skin.

"She had a deal of pain in the night. When she had the aloes, etc., she seemed quiet; ears and horns hot. Could not feel pulse for swellings." Case died.

RECENT CASE.

September 6th.—A cow, the property of Mr. Abel, Haxby, has been on new fog three days. The second day was noticed to breathe rather quickly, but was not taken any notice of, turned into the fog again.

On the third night, September 5th, she was noticed to be worse, so was taken into the cow-shed, and a pint of ol. lini. administered. In the morning, September 6th, another pint of ol. lini. was given. At dinner time (12 o'clock), seeming no better, ½ lb. of salts was given, and another ½ lb. at 4 o'clock in the afternoon.

The order came to see her; my pupil went and saw her at 5.30 p.m.

Found her standing with her nose against a pole, and breathing very heavily. She had not passed any fæces during the day; pulse quick and rather weak, horns and ears warm; had eaten some mash and drunk some chilled water.

The air was expelled from the right lung directly it entered, and the left lung was not so bad—more air coming in, and there was a healthy sound. I gave aconite 10 m., spt. eth. nit. 1 oz., ol. lini 6 ozs., and ordered 1 oz. tr. opii to be given in three hours time. [The above are all my pupil's notes, and he said I would see her same night. I did not return from Scarboro' until 11.15 p.m., so after his report I left her until next day. He said she was bad on her right lung.]

September 7th.—I saw her at 10 a.m. Temperature 101°, pulse about natural, and appearance brighter. She had purged during the night, and passed a quantity of wind, which was very fœtid, after which she was easier. The owner said it was nothing but obstruction, and as soon as she got relief she was better. When I examined her chest there was no unhealthy sound, though somewhat quickened breathing, and especially on right side. I detected on the lower part of right side a swelling, which was emphysematous, about a foot and a-half in diameter. I immediately felt on the loins (where I consider it always commences), and found the same condition to exist on the left loin, but not so much as on the right chest.

I gave ammonia carb. sol., ether, tr. bellad.

September 8th., 11 a.m.—My pupil saw her. Temperature 101⅖°; pulse not so quick and stronger; bowels natural; eating well. The emphysematous swelling on the chest not so prominent, but covering more area, and not so much on the lumbar region; the breathing a little accelerated.

Case recovered.

SURRA.

SURRA (which signifies in Hindustani rotten) is a specific febrile disease caused by the presence in the blood of a hæmatozoon *(Trypanosoma Evansi)*. It originates spontaneously in solipeds and camels, and is capable of being transmitted by inoculation to other animals. But it is neither contagious in the ordinary sense of the word (although capable of production by gastric ingestion), nor infectious. At present the disease has only been recognised and investigated in India and Burma, but it probably occurs in most parts of Southern Asia, and not unlikely in East Africa, Australia, and America, where the country is low-lying and swampy or subject to inundations. It chiefly occurs in India and Burma after the rains (July or August), and continues up to January, during which period it frequently assumes an epizootic form.

Symptoms.

We seldom have the opportunity of witnessing the early symptoms of Surra, the attack usually being a mild one of fever with the animal a little dull and off his feed, but after a few days' rest it apparently recovers. The owner does not consider the case anything uncommon or one requiring professional aid, and the horse frequently goes back to work again. But when the symptoms recur, or possibly after several recurrences, or the original ones become more aggravated and we are called in, we notice the following:—

The attack is somewhat of the bilious fever type, the animal being dull, listless, and leg-weary. With the rise of temperature, or shortly following it, there is generally an attack of local or general urticaria. The mucous membranes become yellow and petechiæ occur on one or the other, but these are not persistent, generally leaving entirely during the intermittent stage of the fever. The conjunctivæ, and particularly the membranæ nictitantes, have a dirty yellow appearance with large purple petechiæ or extravasations upon them. These are also sometimes found on the vulvæ of mares, and when well marked are very suggestive of the disease. There is generally some œdema of the limbs (particularly about the fetlocks and hocks), beneath the belly, chest, and sheath. The animals rapidly lose strength and condition, but the appetite remains good, except when the fever is very high, and even then green forage is eaten freely They invariably suffer great thirst, and advantage is taken of this in administering medicine. The fæces are, as a rule,

normal throughout the attack, but occasionally there are signs of constipation and hepatic disturbance, and, at the termination of the disease, diarrhœa. The urine becomes viscid and of a dark yellow, orange, or orange-green colour, and frequently contains albumen and blood. Signs of catarrh are sometimes present, with a yellow-tinged mucous discharge from the nostrils ; eyelids swollen and perhaps conjunctivitis lachrymation may be very profuse towards the latter end of the disease, and slight hæmorrhage occasionally takes place into the anterior chamber of the eye, followed by an opacity. Ulcers are sometimes found on the Schneiderian membrane, and the submaxillary glands enlarged. The respirations are usually proportionate to the amount of fever, but there is seldom much distress, although the lungs are occasionally found to be more or less affected, and towards the end of an attack the breath may become very fœtid.

The fever is of an intermittent, remittent, or relapsing character, and during the paroxysm of fever if the blood be microscopically examined, parasites may be seen working about eel-like among the corpuscles and attacking the red ones. These disappear more or less suddenly, and with them the fever subsides. But with the recurrence of fever they appear again, at first a few, but swarming towards the height of the attack. At first the blood appears to be normal, but a peculiar vibration may be observed caused by some rapidly moving indefinable organisms among the corpuscles—later on the white corpuscles increase in number, and the red ones from the attacks made upon them by the hæmatozoa get irregular in shape, many of them appearing to be simply irregular granular gelatinous masses of a pale colour which form into irregular *rouleaux* or masses, and in the last stages of the disease the fluid portion of the blood has occasionally been observed to take a faint rusty tinge.

The hæmatozoa vary in size, but are, as a rule, about one-third the diameter of a red corpuscle in thickness, and six or eight times its diameter in length. They are white in colour and have a round, eel-shaped body tapering to either end. The front portion apparently ends in a somewhat stiff neck and blunt head, while the back part tapers off into a long, fine, mobile tail. Its mode of progression is naturally head first with an eel-like motion, but when worrying a corpuscle it frequently moves backwards, dragging the corpuscle with it. It can be seen swimming about freely and forcing its way with great perseverance among masses of corpuscles until it selects one to attack (invariably a red one), it then

takes hold of it and tears and worries it as a dog would a rat. The means by which it grips the corpuscle has not yet been demonstrated, but as its hold is sufficiently strong for it to shake two or three corpuscles about freely or move a moderate sized *rouleau* it apparently must be armed with more than the ordinary sucker. The hæmatozoa disappear more or less suddenly from the blood and remain absent from one to four or even six days. These periods of remittance are very little marked in some cases except in the fall of the temperature and absence of the hæmatozoon, but in others a decided improvement takes place. The œdematous swellings reduce in size. The petechiæ leave the mucous membranes, which become very anæmic or even blanched. The animal looks bright, moves freely about the box and is often capable of taking a considerable amount of exercise, but in a few days our hopes are dashed to the ground again. The animal becomes dull, the coat stares, the m.m. becomes yellow, the petechiæ and extravasations recur, the temperature rises, the hœmatozoa appear, the heart's action becomes irritable and (if nearing a fatal termination), weak with frequent and often distressful anæmic palpitation. In fact, all the old symptoms recur, but in a more aggravated form, the animal becoming each relapse less able to resist the attacks of the hœmatozoa, and towards the last is often affected with partial paralysis of the hind quarters, absolutely refusing to move and when made to do so swaying about as if it has no control over its hind legs. Although the appetite remains good or even voracious quite to the end, there is a remarkable falling away in the condition of the animals, those that live over a few weeks invariably becoming veritable bags of bones. Death comes sometimes quite suddenly and unexpectedly, probably owing to some complication, or the animal becomes delirious, falls and struggles for hours, and dies from exhaustion; occasionally it falls and dies in great agony.

The length of the disease (except in those cases which die very early, apparently from the shock of the first attack of the hæmatozoon) is generally proportionate to the animal's age, constitution, and condition. An old horse in hard work and bad condition very speedily falls a victim, while a young one in good condition will sometimes struggle on for several months, passing through seven or eight paroxysms. Each paroxysm generally lasts about seven days, but in some cases it is only two and in others it may be as many as twenty.

Thus in our diagnosis of Surra we have the history of the

case: the general appearance of the animal (the emaciation, urticaria, œdema, etc.), the fever, the petechiæ, or purple extravasations on the visible mucous-membranes, all of which combined point to the disease, and it only remains for us to demonstrate the presence of the hæmatozoon which alone is diagnostic of Surra. But it must be remembered that this is not always present in the blood, therefore it must be carefully watched for until a paroxysm of fever occurs, when two or three cover-glass specimens of blood should be examined daily, and if after ten or twelve days' careful examination the hæmatozoon is not found, the disease is not Surra.

Prognosis.—Until quite recently invariably fatal, no case having been known to recover; but during the last year Professor Lingard, the Imperial Bacteriologist to the Civil Veterinary Department of India, has been carrying out further experiments with arsenic, and has been fairly successful with that drug in cases that come into his hands early, are fairly young and in good condition—others he considers hopeless.

Cause.—The entrance of the *Trypanosoma Evansi* into the blood is recognised as the *vera causa* of Surra; but the method by which it gains access has not been satisfactorily proved, as it has never been found either in food or water; however, experiments have proved that in from five to seven days after the gastric ingestion of infected blood the hæmatozoa are found in the blood of the patient.

Natives attribute the disease to the bite of a large species of gad fly, and while admitting that this might be true in some cases where the insect came straight from an infected animal, all European authorities (Evans, Steel, Pottenger, Gunn, and Lingard, etc.), are unanimous in attributing it to either the water or food supply, particularly the former, as it is well known that stagnant water is most favourable for the production of infusoria, and the stagnant pools and wells which are so numerous all over the country after the rains offer the simplest and easiest method of introduction into the system. Next, as regards the food supply, the grasses and vegetation grown on swampy ground are the most suspicious. Professor Lingard has carried out some interesting experiments with rats. He found that 30 to 40 per cent. of rats contained in their blood a hæmatozoon apparently identical to that of Surra, and that these appear and disappear from the circulation as in the horse. He subcutaneously injected some of their blood into horses, and although the incubative stage was longer than that obtained by the same process

with horse blood (being 63 days), yet the virulence of the disease when once developed was intense. He next tried experiments on the gastric ingestion of rats excrement and got positive results, but the incubative period was four months. This points to the probability, or at any rate possibility, of many of the Surra cases being contracted through the ingestion of rats excreta mixed with the grain. He also found that the hæmatozoa, although present in the blood of these rats all the year round (periodically), were much more numerous after the monsoon (rains), and that the blood of rats from certain districts were almost always free from these hæmatozoa, while that of the majority of rats from other localities was affected.

Post-mortem.—There are not any really characteristic lesions of this disease found *post-mortem* in India; but Steel, Shaw, Frost, and others who investigated the disease in Burma, reported that there was generally ulceration of the stomach, particularly the left sac, this ulceration sometimes being very extensive, large patches of the internal lining membrane being eaten away, and having the appearance, as Frost aptly describes it, of a piece of leather denuded of its outer film by cockroaches.

The body is much emaciated, all the internal organs in a very anæmic condition. There is a general tendency to yellow or orange-coloured staining of the tissues. At the base of the heart there is almost invariably a deposit of orange-coloured, gelatinous material, and the cavities of the heart contain clots of a yellow, green, orange and purple colour, bathed in dark tarry blood. The lungs are often emphysematous and sometimes the seat of local inflammation. There is occasionally a considerable increase of fluid on the spinal cord, about the lumbar region, which would probably account for the symptoms of paralysis sometimes present. The kidneys are often pale, flabby, and covered with petechiæ.

Treatment and Preventative Measures.—Before the germ of Surra was discovered the disease was looked upon as a form of malarial fever and treated as such, but since the discovery of the *Trypanosoma Evansi*, veterinarians have recognised it as the true cause of the disease and have directed all their efforts to its destruction. For this purpose carbolic acid, iodine, cinchona, alkaloids, mercury, arsenic, iodide, bromide and bichromate of potassium; quinine and arsenic, and various other agents were employed, but all to no purpose, the disease proving invariably fatal in equines and camels. But one marked effect was noticed in the employment of

arsenic, and that was that the period of intermission was considerably prolonged, and acting on this Professor Lingard decided to give it a further trial with, as already stated, a considerable amount of success. He employs it in the form of liq. arsenicalis (Fowler's solution), and only attempts to treat those cases that come to his notice early in the disease and are in good condition, others he considers hopeless.

In his "Summary of further report on Surra," 1895, to the Inspector-General of the Indian Civil Veterinary Department, he gives the following treatment:—"In most cases of Surra in equines a dose of five grains (arsenic) may be commenced with and given twice daily for forty-eight hours, the quantity being increased by half a grain after every four doses have been administered, until seven grains are reached. The latter amounts should be continued twice daily for seven days, in the case of an animal below 800 pounds in weight, but in Australians of 1,000 pounds weight and upwards, the dose may be increased to the addition of half a grain up to nine or even ten grains twice daily for the same period. The dose should then be gradually reduced by half a grain or one grain according to the condition of the patient, until a four grain dose has been reached. Again, if possible, after a period of two days, repeat the treatment, increasing and decreasing the dose of arsenic as above described. But the fact must never be lost sight of, that if arsenic be administered to an animal for a prolonged period, symptoms of gastric irritation will supervene sooner or later. It has been found that by giving kaunji (gruel) to the animal morning and evening directly after the medicine, the above-mentioned symptoms have not made their appearance; consequently it would be advisable to give kaunji to the animals from the commencement of the arsenical treatment. Acute desquamative nephritis is a common complication of Surra, but it must not contra-indicate the administration of arsenic, although the maximum doses cannot be maintained, otherwise the animal will have a relapse, and ultimately succumb to the disease."

Advantage is taken of the animals thirst to administer the liq. arsenicalis in its water. As soon as the organism disappears from the blood gentle exercise should be given, increasing it daily according to the animal's strength and condition, and this, combined with massage, soon removes the œdema.

As regards prevention, the first care should be a supply of good, pure water; and, if there is any doubt about this, it should be boiled.

The grain should be carefully screened and cleaned to remove any rats' excreta. Hay should be obtained from the uplands in another district from that infected. All green forage, such as lucern grass, should be avoided during and after the rains. Stables should be built on high ground well away from swamps.

Diseased animals should be isolated, and thin dung burned. The carcases and stable litter should also be burned.

The stables should be kept as free from rats as possible.

THE CLYDESDALE HORSE SOCIETY.

THE annual meeting and dinner were held in Glasgow, on the 6th February, Sir Robt. D. Moncrieffe, Bart., presiding. The after-dinner speeches were numerous, not the least interesting being those by Principal McCall, Glasgow Veterinary College, and, in reply, that of Mr. Lumsden, one of the leading directors of the Highland Agricultural Society. We are indebted to our excellent contemporary, the *North British Agriculturist*, for the following reports of them : —

Principal McCALL gave the "Highland Society," coupled with the name of Mr. Lumsden, one of the directors. For almost thirty years he said he had watched practically every step taken by the Society. He observed only the other day that the Society had £80,000 of funded capital behind it, and for that he would give the pecuniary management the greatest credit. But it should not be the main object of a Society like the Highland Society to accumulate funds more than what was actually needed for its purposes. He did not think it was incumbent to build up such a large reserve for those who were to come ; in fact, he was not at all certain that posterity would not benefit more by having some part of that large sum spent just now than left over in cash. When he compared the Royal Agricultural Society with the Highland Society he was not satisfied. The Royal Society gave annually a grant of £500 to the Royal Veterinary College for research. That money had, he believed, been paid back over and over again in the work accomplished. If they referred to the pages of the Royal *Journal*, they would find articles contributed twenty years ago which held good even at the present time. What had the Highland Society done for research? Practically nothing. Work of this kind was never more necessary than at present. They had discovered antidotes for such malignant diseases as rabies and anthrax, and tests for such other diseases as glanders and tuberculosis. What they now wanted was a vaccine which would be a preventive against the two latter diseases. Such a vaccine was possible ; in fact, he was certain that before many years were over they would have an antidote for both glanders and tuberculosis. Might not some of this great accumulation of £80,000 be devoted to such a purpose as the discovery of that antidote? There was another point, rather a delicate one, but he had been asked to refer to it. Did they think it was right for the Highland Society to continue in its old practice of allowing prize tickets to be put on the heads of animals used for breeding purposes that were known to be unsound? The Royal Agricultural Society was again a

good example in this matter, every animal at the Royal Show having to pass an inspection for unsoundness before getting a prize. That was a wise and sound policy, and the directors of the Highland Society should really consider where they stood in this matter. Stallion owners would not buy a young animal that was unsound, and would very soon return him on the breeder's hand. Nevertheless, they had no hesitation in sending unsound animals round the country districts to work great mischief in this way.

Mr. LUMSDEN, in reply, said he was glad to hear from his friend, Professor McCall, that they had large funds at their credit. They must, however, remember that the Highland Society had to visit a number of small places which were not very profitable. If they were not careful in spending and keeping something back they would soon be in a similar position to the Clydesdale Horse Society. With regard to spending sums on the veterinary profession, he thought it would be a good enough thing, but it should come more from the Government. They spent a certain sum when all the cows in the country were slipping their calves, and tried then to find out the cause. They were told that if they would spend another £100 they might, perhaps, learn something. The veterinary inspection of all animals in the showyards struck him as being a rather big question. They could not stop at horses; they would have to go on and test all the cattle for tuberculosis. The system had by no means done so well in England as they seemed to think. A horse came up one year and was passed. Next year the same animal again came up and was condemned. What was the result? The whole of the progeny of that horse was virtually ruined. Veterinary inspection at their shows was, he believed, impracticable; and, at any rate, they might wait until the veterinary profession knew exactly what to cast for, and what not to cast for. The Highland Society had all along done well by the Clydesdale breed, and were giving liberal prizes as usual, at Perth, this year. It would, however, be a long time before they gave prizes for the cross mentioned by Mr. Ferguson.

THE LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

ADDRESS BY THE PRESIDENT, J. H. CARTER, ESQ., F.R.C.V.S., BURNLEY, LANCASHIRE.

GENTLEMEN,—Permit me in the first place to return you my sincere thanks for the honour you conferred upon me at the last quarterly meeting by electing me to the presidential chair of this Association, and I trust during my year of office, peace, contentment, and goodwill may continue to dwell in our midst as hitherto. When I look back and remember the eminent practitioners who have graced this chair in years gone by, and the excellent manner in which the meetings have been conducted from time to time, I reflect and ask myself the question, have I been wise in accepting the responsibilities of office without a more mature consideration? My reply, however, voluntarily asserts itself in the affirmative, for I consider it should be the ambition of every individual member of such an Association to aspire to become its president sooner or later, as the case may be.

I accept your generous offer with pride, and assume the duties of that office made doubly illustrious by the virtues and fame of my predecessors, impressed with the broad wisdom of their plans, and far-reaching foresight of their genius.

With what powers there are in me I pledge myself to continue and carry out to the best of my ability the duties which devolve on me as president.

Well, gentlemen, I believe it is customary at our annual meetings for the president to give a *résumé* of the work achieved during the past twelve months, but before attempting to do this, there is one thing in particular I should like to mention, and especially at this our annual gathering. To those members who attend most regularly our quarterly meetings, it cannot be but patent there has unfortunately been a falling off in the attendance. When you come to consider we have about 85 members of this Association, and our meetings only muster on an average some 20 to 25 members, I have come to the conclusion there must be a cause for this irregular or non-attendance, and I propose during my presidency to try and find out what that cause is, and if in my power to remedy it, and I entreat you, gentlemen, to give me your assistance, by attending more regularly our quarterly meetings, when I feel sure this Association, of which we are justly proud, will retrieve its position of being the leading and most weighty Association in the United Kingdom, and will again hoist its standard to that lofty position as to create the envy of all kindred associations. Without egotism, gentlemen, I purpose to maintain the high reputation this Association has always enjoyed, and if in my power to still further enhance that reputation.

So far as I shall succeed therein I know not, time alone will prove, but I do sincerely trust my aid in this direction may be the means of making our Association strong, useful, and honoured. In asking your co-operation in this task, it is gratifying to know I shall have the earnest, loyal support of every officer and member; let us then, one and all, to his fullest ability, do his share to maintain in greatness, and extend in usefulness this Association. I have now given you a rough outline of the task I have taken in hand, and which I purpose carrying out, so I will not weary you any further upon what may be considered good designs, if good results attend them.

We will now pass on and briefly review a few of the principal scheduled diseases afflicting our stock in Great

Britain during the past year, 1895. It is gratifying to know that not a single case of *Pleuro-pneumonia* or *Foot-and-mouth disease* has been recorded in Great Britain during the past year.

Anthrax.—This disease has not been so prevalent as in 1893 or 1894, but higher than in 1892.

Glanders.—More numerous than in 1894, but less than the two preceding years. The greater proportion as usual occurred in London.

Rabies.—This terrible disease shows a great increase as the following will prove :—

In 1892	..	40	cases only recorded.
1893	..	94	,, ,,
1894	..	258	,, ,,

and 1895, the alarming total of 723 cases, cases in 1895 being three times as numerous as in 1894.

Well, gentlemen, is not this alarming increase of this dreaded disease sufficient to warrant more stringent measures for its suppression? I emphatically say yes, and it should be done at once and without a moment's delay.

The only way, in my opinion, to eradicate this disease, would be to inflict a higher dog tax. This would have a very desired effect, viz., by ridding this country from a lot of worthless, half-starved street wanderers, that are neither use nor ornament, but a positive every day danger in our streets; to institute a general muzzling order throughout the country for six or even twelve months, if necessary; all dogs to wear one regulation muzzle bearing the Government stamp, and no other muzzle to be recognised by the police authorities, and all offenders infringing or breaking the order to be severely punished.

Swine Fever.—The position with respect to this very interesting disease is anything but satisfactory, notwithstanding the fact that during the past year 70,000 pigs were slaughtered on account of the disease, whilst about 11,000 died. This is in excess of the year previous, 1894, by about 3,686 pigs.

The mortality from this disease during the past four years has increased alarmingly year by year, in spite of all the precautions issued by the erroneously so-called Animals Department of the Board of Agriculture.

As you are aware, since December 1st, 1893, the Board of Agriculture has been dealing with this disease—instead of local authorities, as hitherto—so far as slaughter and compensation are concerned, in a very energetic manner. And what has been the result? I say, without fear of contradiction,

that it has been one of the most miserable fiascos of modern times. And can it be wondered at, when we take into consideration the great lapse of time that has existed between the first report of the disease and consent for slaughter? In many cases a week or more has elapsed before such consent has been granted.

I have witnessed some most revolting sights during this outbreak of swine fever. One case, in particular, where upon my arrival I found the few remaining living pigs actually lying upon their dead companions, the farmer having had strict instructions from the police officer that they were not to be disturbed until the Board's inspector had been. I may say, gentlemen, I took the law into my own hands and had the dead animals immediately removed and buried. It is now twenty-six years since the Veterinary Department of the State had its duties assigned to it, and during that time cattle-plague, foot-and-mouth disease, and pleuro-pneumonia has succumbed to its energetic work, and doubtless swine-fever, instead of costing the country £200,000, would have been completely eradicated, at less than one-quarter of this amount, had the old system of treatment been carried out, instead of this uncalled-for interference.

Advertising.—This is a subject that has for a long time been under consideration by the veterinary profession and the Council of the Royal College of Veterinary Surgeons. This latter body have recently passed a bye-law declaring that such practice (advertising) is disgraceful from a professional point of view.

Well, gentlemen, there is, if I may so put it, advertising and advertising; by so saying do not misunderstand me and run away with the idea that I uphold or advocate such procedure, for example, as advertising in the local papers, inside tram cars, issuing pamphlets of so-called specifics broadcast, and many other such methods of advertising too numerous to mention here.

But on the other hand, gentlemen, when you come to consider the great competition that exists amongst certain, shall I say, quack medicine vendors all over the country gulling the public, having representatives attending all our cattle markets and fairs, issuing papers and pamphlets broadcast by placing them by the dozens on the tables of public houses frequented by farmers and stock owners, and the gentleman representing such cattle medicine firms being there in person touting for orders from your client right before your very face, I confess it must indeed be galling

and trying to the best of us, and more especially when out comes the order book and a good all-round order is booked of the empirical nostrums; and another very trying instance I have experienced, that of being called out in the middle of the night to a case, and upon arrival, after examining the animal, you enquire, "Have you given anything by way of medicine?" and you get the barefaced reply, "Oh yes, we gave one of So-and-so's black drink," or red drench, or some other outrageous name is given, followed by the remark, "I always have a box of these drinks by me, and when they fail to have the desired effect we send for you." This sort of thing is most encouraging, to say the least, but you have to swallow it.

Under such existing circumstances I do maintain, though I may not meet with universal approval, I say I do contend that we are fully justified, by way of self-defence (if we so wish), to issue a decent pamphlet, portraying our so-called specifics to our own particular farmer-clients; but beyond this I should strongly protest against such procedure being carried on.

Our city practitioners, and those in large towns with lucrative practices, have not to contend with such bare-faced opposition; but, on the other hand, to the hard-working country practitioner it is quite a different thing.

Then again I see no wrong in a newly qualified young gentleman, say, commencing practice in a strange part of the country, where he has neither kith or kin, inserting a card in the local paper to the effect, "Mr. ——, M.R.C.V.S., Veterinary Surgeon," and address.

Competition, gentlemen, is far different now-a-days to what it was in the early days of our forefathers.

To those gentlemen who are in affluent circumstances, whereby they can afford to purchase a good going practice, or say those who are fortunate enough to succeed to their father's already established practice, these gentlemen have no conception what it is to have to enter a strange town and there work—and it means ten years' hard work to build up and establish a successful practice—and, in many instances, to struggle against an old established and popular practitioner; and, as you are aware, this world is not over charitable, particularly to a stranger, as, doubtless, many of us have experienced.

It is in consequence of so many veterinary preparations of the so-called "Cattle Medicines" which glut the market, being offered to the public by parties totally unqualified to under-

stand the diseases of animals for which they so lavishly prescribe, that compels me to take up this attitude. I do think, under such existing circumstances, it is our duty, in the cause of humanity and in the interests of the stock-keeper, to offer to our individual farmer-clients (if we so wish) a list of veterinary preparations which may be used in the particular cases for which they are recommended, with benefit to the animal and with confidence by the stock-keeper.

If such procedure could be carried out generally it would, in due time, have the desired effect of exterminating these so-called "Cattle Medicine Vendors."

We are not alone, gentlemen, in committing this unprofessional act, for there is no method of advertising worked more energetically than the compilation of books; for can it be seriously maintained that the large number of medical works issued from the press are *bonâ fide* intended for the information and instruction of medical men?

Again, do we not constantly see in our daily papers paragraphs relative to the illness of prominent individuals, and the announcement of the medical attendant given with such fulness which leaves no doubt as to the ulterior motive.

Another class of advertisers are the men who give certificates to vendors of certain foods, soaps, and many other commercial commodities. These certificates are duly published in the newspapers, with many cunning additions. Many other instances could I cite, but time will not permit. So that you see, gentlemen, we are not the only profession who adopt this method of making ourselves and our commercial commodities known to the world. *Lucri causâ.*

Undoubtedly, from a professional point of view, the man who advertises takes an unfair advantage of his professional brother who holds himself aloof from such so-called degrading practice.

But then comes the question, How are you going to stop advertising? I am at a loss to know where you are going to draw the line; for I maintain if you stop one you must stop all, and even then you can only apply your stringent measures to members of our own profession. And do you not think this would be playing directly into the hands of the very men who do all the mischief by taking the meat out of the mouths of those who are most justly entitled to receive it?

It is a problem which will be difficult to solve.

Professional callings unfortunately are not what they used to be, and how much more advantageous it is to be engaged in trade, a glance at the list of Wills proved during the past

year will suffice. For instance, the average professional man is lucky if he can keep himself and his family during his life, and give his children a good education, and a decent start in life. He rarely, if ever, leaves a large fortune behind him, or buys one of the large estates thrown on the market; thanks to the depression in agriculture.

Even medicine and law, the two professions in which the largest sums are earned, seldom reward those who follow them with a fortune of, say, £100,000, and the lucky men who leave such sums behind them are rare indeed.

But the scene is changed when we turn to the fortunes made in trade. Among them £100,000 is a comparative trifle, and such amounts as a quarter, or half, or even an entire million are by no means out of the way.

The smaller fortunes made if a trader is at all successful, would be considered enormous if made by a professional man, while in the church, navy, and the army they would be absolutely out of the question. And yet the prejudice against trade dies hard, wonderfully hard indeed, when it is considered that the money made by the great brewers, ironmasters, and cotton spinners very frequently leads to a title, and to consequent effacement of the stigma of trade.

Money, too, and the ease and comfort it can bring counts for much more than it did even half a century ago, and in the public estimation it now very generally secures the respect which was formerly paid to the learned professions.

The three years curriculum at our colleges is now past history. Another year of study has been added; much has been said for and against this new departure. Personally, I look upon it as a distinct advance in the right direction, and cannot but materially enhance our professional status in the eyes of the other learned professions and the general public.

As education is acknowledged to be the prime factor in the formation of modern society, so on the education of the present veterinary pupil will the near future greatness of our profession depend.

The latter half of the 19th century has been distinguished for the great discoveries in all branches of science, but to no department can this be more truly applied than that of medicine. Within it there has grown up a study which five and twenty years ago was looked upon as a fad; to-day, gentlemen, it is a great science—I refer to bacteriology.

By the labours of Koch, Pasteur, and Lister the rôle played by germs in the causation of disease has been brought to light. Barrier after barrier has been successfully passed, and

now in some of the worst forms of epidemic disease, active warfare is being maintained successfully against microbes.

It is only within the last year or two that a rational treatment for successfully combating diphtheria and other allied diseases has been introduced.

As yet, however, the lay mind is prejudiced and conservative as to the new treatment, but there is no doubt that it is rational, and based on sound scientific evidence. This new treatment can prevent diphtheria, or cure it after it has begun, thanks to Behring.

The fever rapidly disappears, the obstructing membrane is removed from the throat, and the patient's condition is changed from one of extreme suffering to one of ease and comfort.

Children have been almost at the point of death one day, and completely relieved two days after, a thing unprecedented under the older methods of treatment. This principle of blood serum treatment so-called (serotherapy), happily does not confine itself to diphtheria alone.

Curative serums are now prepared for the treatment of pneumonia, tetanus, erysipelas, snake bites, and puerperal fever, and the results have so far been extremely encouraging and point to Behring's discovery as one of the greatest of the century, and one of the most important ever made in the history of medicine.

There are many questions of vital interest exercising the minds of the members of our profession at the present moment I should like to have entered into, but time is too scarce to permit at this juncture of a fuller inquiry.

There is, for instance, the Matriculation Examination, the Jubilee Memorial, the Royal Veterinary College for Ireland, Notification of Infectious Diseases, and the Royal Commission of Inquiry into Tuberculosis.

This inquiry has taken nearly five years to complete, and cost the country £7,500 to tell us something we already were in possession of. It recalls the old adage, "There's nothing new under the sun," and certainly, as far as this exhaustive and expensive inquiry is concerned, to my mind is only a recapitulation of facts that were already well known.

In conclusion, I now come to touch upon the melancholy part of my address.

The past year, as you are aware, has been most disastrous. It has removed from our midst two of our most venerable and highly-respected members of this Association. I refer to the late Mr. Thomas Greaves and Mr. Peter Taylor, both of this

city. Their loss cannot but be keenly felt, not by the members of this Association alone, but the whole profession throughout the Kingdom mourn their irretrievable loss: two names that for the past fifty years have been as familiar as any household word to the members of our profession; two men who may justly be deemed the founders and architects of this Association, for which their love and devotion to the last moments of their lives knew no wavering or abatement; men noble and pure-hearted, gentle in their affections, yet firm and resolute in their devotion to the right.

Death proved stronger than even their strong will and unwearying energies. Though they are gone from us for ever their work remains to attest their genius, their far-reaching foresight, their noble self-devotion.

All acts done by them for the good of this Association were actuated by a broad comprehension of its needs, an unselfish devotion to its interests, and an abiding faith in the loyalty and confidence of its membership. Gentlemen, allow me to express to you my gratitude for the silent and attentive hearing you have accorded me during the reading of this my presidential address.

SWINE FEVER.

Instructions to Veterinary Surgeons specially employed by the Board of Agriculture.

ON receipt of instructions from the Board of Agriculture to inquire into a suspected outbreak of swine fever, the veterinary surgeon will be so good as to carry out the inquiry in the following manner:—

1. On arrival at the premises where the disease is reported to exist, the veterinary surgeon is to make general inquiry into the condition of all the pigs upon the premises, including their past history, and, in the event of his finding that any of them have died, he is to make a careful examination of the carcase throughout the whole of the intestinal and respiratory track, with a view to discover the cause of death, and the nature of the lesions present.

2. It is quite possible that the veterinary surgeon may not find any of the typical lesions of swine fever in the first carcase he examines, and if no other pig has died he is to extend his inquiry to an examination of all the pigs on the premises. If after careful clinical observation he detects symptoms among them which lead him to suspect that swine fever is present, he is to arrange with the owner as to the

value of all the diseased or suspected animals, and he is authorised to slaughter one or more of them, if necessary, and continue to make *post-mortem* examinations until he is satisfied that swine fever does, or does not, exist.

3. When conducting his inquiries into the condition and general health of the swine on the premises, the veterinary surgeon should carefully examine any pigs which present an unthrifty condition, as experience now shows that there are many cases in which swine fever assumes a chronic form, the clinical symptoms which have generally been regarded as associated with swine fever being entirely absent. Pigs affected with this form of swine fever gradually fall off in condition, and present an unthrifty appearance. They should be slaughtered, and on *post-mortem* examination, extensive diphtheritic or ulcerative lesions will commonly be found. All swine in this condition should be regarded as decidedly suspicious.

4. So soon as the veterinary surgeon has established the fact that swine fever exists, he is at once to slaughter all the other apparently diseased pigs on the premises, and arrange for the destruction of the carcases or their burial in some fit and suitable place at a sufficient depth and covered with lime.

5. In cases where in the opinion of the veterinary surgeon swine fever exists, he is to forward with the least possible delay, addressed to the Chief Veterinary Officer of the Board of Agriculture, 4, Whitehall Place, London, S.W., portions of the viscera in which the typical lesions are present. These parts are to be cleansed and, after being allowed to drain, wrapped in a cloth previously moistened with some disinfectant, and enclosed in the waterproof bag sent to him for the purpose.

6. When forwarding to London the portions of viscera selected, the top of the bag in which they are placed is to be turned down and then firmly secured with string in such a manner as to prevent the escape of any liquid which may happen to have remained in the intestines.

7. The two address labels are to be filled in, one being tied to the bag and the other firmly attached to the box in which the bag is to be packed.

8. The box is to be forwarded at once by passenger train.

9. The Veterinary Surgeon's Valuation Form (S.F. 3.) is to be fully and carefully filled in, and forwarded to the Board *by earliest post*.

10. The valuation is to represent the fair market value of the pigs immediately before they became diseased, and the

owner is to be informed that, should the pig slaughtered be affected with swine fever, the Board have no power under section 16 of the Diseases of Animals Act, 1894, to pay more than half the valuation.

11. The veterinary surgeon will be held responsible for the making of the valuation on the basis of the fair market value and no more, and it is to be borne in mind that compensation is paid, not for the purpose of relieving pig owners from their losses consequent on the outbreak of disease on their premises, but in order that the disease may be exterminated. Under no circumstances is the valuation to exceed £8, and this sum can be approached only on rare occasions and under very exceptional circumstances.

12. The enclosed copy of the rules applicable to a swine fever infected place is to be handed by the veterinary surgeon to the occupier of the premises, who is to be cautioned that any neglect on his part to give effect to these rules may not only tend to spread disease in the neighbourhood, but may also render him liable to heavy penalties.

13. The veterinary surgeon, while in no way interfering with the owner's right to slaughter pigs on the premises and to remove the carcases subject to the conditions set out in the Rules, is to take the necessary steps to prevent the removal while alive of all pigs which from any cause may be regarded as having been in contact with or exposed to the infection of swine fever, and the veterinary surgeon is to see that all proper precautions are taken to prevent the spread of the disease.

14. It is most important that veterinary surgeons, butchers and other persons engaged about pigs affected with swine fever, should be very careful in carrying out the thorough disinfection of the instruments used in slaughtering and making *post-mortem* examinations. They should also, before leaving the premises, thoroughly disinfect their boots and wash their hands with soap and water. It is desirable that when engaged in this examination the veterinary surgeon should wear waterproof overall clothing, which can be removed before leaving the premises.

Board of Agriculture, P. H. ELLIOTT,
February, 1896. Secretary.

Horse owners in buying foreign grain may be well advised to have inserted on invoices of any grain they may buy, that such grain is free from "Indian Peas," which have been used as an adulterant with such disastrous effect.

GOVERNMENT GRANTS TO VETERINARY COLLEGES.

THE matter of the Government contribution to veterinary colleges in England and Scotland, it is understood, was brought before the Lord Provost Committee of Edinburgh Town Council at a meeting recently, and in view of the fact that a contribution was likely to be received from the Government by the veterinary colleges in Ireland, the committee were of opinion that steps should be taken to have these colleges in England and Scotland put on the same footing as the Irish colleges.

Editorial.

BOARD OF AGRICULTURE.

Annual Reports of Proceedings under the Contagious Diseases (Animals) Acts, Markets and Fairs (Weighing of Cattle) Acts, etc., for the year 1894. *Presented to both Houses of Parliament by command of Her Majesty.*

WHEN I first saw this report I was much surprised that the word veterinary was absent from the outside cover and from the title page, and I wondered if this were the beginning of the end of the Veterinary Department of the Board! This wonder was certainly accentuated when I read the conclusion of Major Tennant, "Principal of the Animals' Department," who says, "It must of course (why, of course?) be a matter for the consideration of pig-owners generally whether in their opinion the possible extinction of the disease (swine fever), is worth so severe a trial of their endurance as must be necessarily entailed by such restrictions, but having regard to the experience gained in the past 14 years, during which local authorities, *although endowed with ample powers*, failed to make any progress towards its final extirpation, it seems hopeless to expect any final success unless swine owners are prepared to submit for a time to interference with their trade, and unless local authorities afford the Board their hearty co-operation and assistance." This statement seems to me to be a confession that the proceedings for the suppression of swine fever as carried on at present have proved, what is really the case, a dead failure, but besides the confession of failure it contains two statements which are not in accordance with facts. 1st. "Unless swine owners are prepared to submit for a short time to interference with their trade." Now, so far as

my knowledge goes, swine owners are only too anxious and willing to submit to interference with their trade, if they thought that the measures of the Board would ultimately do any good. What they object to are the present measures, and certainly these are most objectionable. For example, a report is sent to the Board that swine fever is suspected at a certain place; in the course of time a wire is sent to some veterinary surgeon, not necessarily the nearest one, and who knows the district, to hold himself in readiness, on receipt of instructions and a waterproof bag, to examine the pigs and premises mentioned, to slaughter a pig, and send his opinion and the viscera to London. As a rule, he hears no more about the matter; but very often, perhaps in a few days or a week, or more, he is ordered to examine the pigs, etc., a second time, the Board being, seemingly, not satisfied with the opinion already sent.

During this period the premises are under police supervision, the owner is not allowed to sell, nor otherwise dispose of, any of his pigs, nor is he allowed to bury his dead ones. The veterinary surgeon, on his second visit, frequently finds that several pigs have died and are lying, unburied, about the premises, eaten by rats, who thus become the carriers of the contagion to other premises in the neighbourhood; and the pity of it, the pig owner, generally a very poor man, receives no compensation for the dead ones. A report is sent again to London, when probably the Travelling Inspector appears on the scene, and immediately proceeds to value and slaughter the, perhaps, few remaining pigs. I have heard it stated that the burial is often a very superficial affair, and that an explosion has occurred, the superimposed earth being scattered about in every direction.

I have had considerable experience as an Inspector, and can safely say that, under the local authorities, the duties were performed in a much more efficient and satisfactory manner, the veterinary inspector having full powers given to him. After having intimated the disease to their clerk and to the Board, the remainder of the herd were at once slaughtered, the owner receiving a fair valuation; all healthy pigs, considered by the inspector as being fit for food, disposed of for that purpose, and those not considered fit properly buried and covered with lime. Of course, there was one objection to the local authorities having powers, namely, that those powers were non-compulsory, and, consequently, were not uniformly carried out, being totally neglected by some, whilst strictly observed by other, local authorities.

The second misleading statement is as follows:—"And unless local authorities afford the Board their hearty co-operation and assistance." I see no difficulty in obtaining this co-operation and assistance from local authorities; indeed, I learn that deputations have waited upon Mr. Long, to press upon him the necessity of receiving this co-operation and assistance. Offers and suggestions of these deputations were coldly entertained by the minister, and the members of the deputations were told as much as to go home and mind their own business; that the Board could on no account act upon their suggestions. And what were these suggestions? Simply that the inspection, slaughter, etc., should be carried out as formerly by those on the spot, and that the compensation should be paid, as at present, out of the Imperial Exchequer, and not out of local rates, as had been the case before the whole management was taken over by the Board in London. These suggestions were considered to be reasonable both from the economic and the efficient points of view. The other points of the Report of the Principal deal with importation, markets and fairs (weighing of cattle), etc. The police officers who have assisted the officers of the Board, are complimented for their efficiency, etc. Then the Principal deals with the duties of the Board in connection with the contagious and infectious diseases, hazards some opinions upon the insidiousness, virulence, etc., of contagious diseases, matters which are purely professional and scientific, and which ought to have been dealt with by a professional and not an amateur. With reference to sending the viscera to London, to which so much objection has been raised, individually, I see no objection, so long as the Board pay the compensation; indeed, it would be unreasonable to ask for compensation if the Board had no say in the matter.

So much, then, for the Principal's Report, which ought to be carefully studied by every member of the profession, for I feel sure that they will feel convinced that they, and the profession they belong to, are "very small potatoes" indeed.

The first 52 pages contain the report of the Chief Veterinary Officer and here there is evidence of laborious work and careful study. It mostly and necessarily deals with swine fever, which the whole of the year has occupied a very large part of the time of the veterinary officers in the examination of the viscera of pigs slaughtered under the provisions of the Swine Fever Act of 1893, "and it is necessary to explain that no pigs are slaughtered as having been exposed

to infection until these officers have repeated the nature of the disease with which the first or test animal was affected," etc. Then some observations are made as to what the Swine Fever Act has done in promoting knowledge amongst veterinarians and the Officers of the Board of pig diseases generally, and we have a list of the causes of the illness and death of pigs examined by the Board, and amongst them are included "choking with potatoes, choked by administration of medicine, overlain by mother, injured and ribs broken, indigestion by improper feeding, inflammation of stomach and intestines, inflammation of liver, cirrhosis of liver," etc., etc. It may here be stated that veterinarians, particularly country practitioners, were not quite so unconscious of such diseases and accidents even before the Act of 1893, but let it pass. It is again pointed out that swine fever is more prevalent during the summer months than in the spring, and that it gradually decreased towards autumn and winter. This statement, which has been noted for years past, has been attributed to the circumstance that there is always a greater trade and movement in pigs in the warm than in the cold seasons of the year, pigs being more in demand by dairy farmers and others in summer than any other period. This conclusion can only apply to the general and not to local circumstances as it is within the experience of many that the converse is the case. Then the differences between the manifestation of the swine fever and pleuro-pneumonia in cattle are pointed out very clearly.

Reference is made to statements by professional witnesses examined by the Departmental Committee of 1893, who referred to the existence of disease in the lungs of pigs affected with swine fever; "but constant observation and subsequent inquiries into cases where lung lesions alone have been detected have led to the conclusion that the only lesions to be relied upon as indicative of swine fever are those which are to be found in the intestinal track, lesions in the lungs in cases of swine fever being by no means constant."

Unfortunately, no reference is made to the observations and conclusions of Continental and American writers, that there is more than one form of disease which goes under the name of swine fever, namely—

(1) *Swine plague*, a specific septicæmia produced by a small bacillus, inducing gastro-enteritis, hæmorrhagic nephritis, enlargement of the spleen, and inflammation of the heart, liver, and voluntary muscles.

(2) Contagious or infectious pneumonia, which is produced by an ovoid bacterium inducing pulmonary changes of a necrotic and caseous nature, and

(3) Hog cholera (the swine fever of the Report), due to an oval, mottled, ærobic and anærobic bacterium, characterised by ulceration and diphtheritic exudation in the intestinal track.

Is it not possible that we have at least two of the above diseases amongst the pigs of this country? And whilst pondering upon this question one can only regret that microscopical and other methods of research have not been brought to bear upon the question.

The plates are very beautifully executed, and one fact, hitherto but little known, has been brought to light, namely, the occurrence of necrotic spots on the mucous membrane of the stomach.

Whilst dealing with the lung disease of cattle landed from Canada and the United States, Mr. Cope still maintains that the disease is contagious pleuro; and I do not wonder at this, because the problem was solved without the aid of scientific men by a late President of the Board of Agriculture, who stated that it must be pleuro-pneumonia because he had seen the lungs. Who can go against this? Mr. Cope very carefully gives the *post-mortem* appearances, and on reading it one must confess that they are similar to those of pleuro. Unfortunately, however, nothing is said about the microscopic appearances of the lesions. That there is pleurisy associated with this American broncho-pneumonia, and a marbled appearance, I am bound to admit, but a careful comparison of the two diseases will at once strike the unbiased eye that they are two different conditions. In sections of the Canadian disease there are yellow points which, when pressed upon, discharge a yellow, more or less purulent, catarrhal product from the bronchii, whilst in pleuro these catarrhal products are absent; but both blood vessels, bronchii and air cells will be found blocked up with fibrinous coagula —a condition not seen in the American disease. I have, therefore, to maintain that the exclusion of Canadian cattle from this country for feeding purposes is founded on wrong grounds. It is very evident that the Chief Veterinary Officer is not very strong in his opinion, as further on he states, in answer to the Canadian authorities who deny the existence of pleuro in the Dominion, and call the disease "Transit Pneumonia," "whatever name may be given to this disease it is certain that it possessed all the characteristic appearances

of contagious pleuro-pneumonia." The fresh specimens were submitted to several experts in the veterinary profession, who stated that the lesions and appearances were such as had always been regarded as indicative of contagious pleuro when found in the lungs of cattle in this country. Mr. Cope does not mention that these lungs were submitted to other experts who denied the identity of the disease with pleuro.

"Like that disease" (pleuro), Mr. Cope says, "it is clearly specific and of a low infective power, otherwise further cases would have been found in some of the cattle when the cargo was slaughtered. This report of Mr. Cope's deals with two cargoes, one of 400 cattle, per s.s. Toronto from Montreal to Birkenhead, 20th May, and that of 510 by s.s. Laurentian also from Montreal to Birkenhead, 23rd May, 1893, and some further cases in June found at Deptford and Glasgow, but the number is not stated. Mr. Cope repeats the statement made by Professor Brown that this disease, like pleuro-pneumonia, is of low infective power. Now as to the infectiveness of pleuro, I gathered for the first time when I read Professor Brown's opinion that it was of low infective power, but even granting that its infection was low, is it in accordance with reason and experience that only one carcase in each of these two cargoes of 400 and 510 respectively should be found presenting signs of disease.

Then as to the infectiousness of this disease. How does Mr. Cope or Professor Brown know that it is infection at all? Surely the finding of one or two diseased lungs in such a large number of cattle is no proof of infection. If the Board were anxious to put this supposed infectiousness to the test and put an end to all doubt, they would have agreed to proposals to that effect offered to them by a Scottish agriculturist.

When the disease was discovered in France, the Government of that country had it thoroughly investigated by Nocard, and he came to the same conclusion as myself that the disease was an ordinary catarrhal or broncho-pneumonia, very often associated, as in the human being, with pleurisy. I may state that the same pathological condition of the lungs will be found in pneumonias, acute and chronic, arising from chills, chronic blood poisoning from drinking contaminated waters, and in post-parturient pneumonias arising from retention of fætal membranes or any other cause of sepsis or septicæmia.

Notwithstanding these differences of opinion existing between the Chief Veterinary Officer and myself, I heartily

recommend his Report to the careful perusal of every member of the profession, who will, I am sure, not only admire the ability of Mr. Cope, but sympathise with him, and with the profession which he represents—with him as one placed not at the head of the department, and with the profession as one which is being snuffed out to make way for amateurs.

The report upon Inoculation for Anthrax is well worthy of consideration. It appears that those who have experimented in this country have arrived at different conclusions to our Continental brethren. Can it be that British experimentalists are a lot of blunderers?

A FEEBLE DEFENCE.

I AM sorry to have to avail myself of editorial privilege in order to acquaint the readers of this journal with the defence which Mr. Dollar has thought good to make in regard to the complaint brought by me against the Examination Committee in the January number of the VETERINARY JOURNAL.

The young gentleman's defence is so feeble that I at first thought I might leave the whole matter to the good feeling of my colleagues in the profession, but I found it impossible to pass over the grave personal charges which he makes against myself. I thought it undesirable to allow such flippancy to pass without protest, and I felt bound to guard my friends against Mr. Dollar's sophistries and errors. This must be my excuse for bringing the dispute once more before my readers. It is very annoying to find Mr. Dollar trying to change the *venue* of the dispute, and running away to the editor of the *Record* with his complaints. Had he been imbued with a truly courteous, not to say manly, feeling, he would have written to me direct, and not have tried to injure me with his poisoned arrows from beneath the secure shelter of a brother editor's shield. When I undertook the editorship of this JOURNAL in January of last year, I invited all who had anything to say, provided it was important and not scurrilous, to contribute to my pages; I do so still, and I should welcome even an attack—of course, a fair and manly attack—from any opponent. But to try to transfer the matter to another journal by sending in his own version to the *Record*—certainly a well-conducted and widely-read journal—knowing that I could not well follow him thither, seems to me discourteous and unbecoming. Perhaps this did not occur to Mr. Dollar, and perhaps one

ought not to be too hard on a young man whose experience is not yet equal to his confidence, but it might be well for him to be more careful in future.

The position which I took up has been completely vindicated by the closely-reasoned and altogether admirable letter of Mr. W. F. Barrett, which appeared in the *Record* of 15th February, and which I append hereto as the antidote to Mr. Dollar's poisonous doctrine. In this letter Mr. Barrett sweeps away all Mr. Dollar's sophistries and dispels them for ever.

Mr. Dollar so far forgets his good manners as to accuse me of deliberate misreading. He attempts to distinguish between "whether they had been all obtained at one time or not," and "it does not matter to the Council how or when they were obtained"; with the exception of the word "how," there is no difference that I can see, and really this difference is only verbal; it is accidental, and would have no effect whatever on the validity of a set of certificates, let us say, of the Scottish Education Department. A lad passes two subjects, let us suppose, at Aberdeen; he comes to Edinburgh to finish his school training, and, in an Edinburgh school, he passes other two subjects; are his certificates invalid for that reason? Certainly not, according to the General Medical Council and our bye-law No. 52, which is the same thing and by which, as Mr. Barrett says, Mr. Dollar and all other authorities are bound. The rest of Mr. Dollar's remarks under this heading are mere rhetorical flourish—he must pardon me if I say bombast; he has the unfortunate faculty of setting up men of straw, and then riding full tilt at them by way of showing his prowess and dexterity; it is, doubtless, very amusing and very exhilarating to him, but it is somewhat saddening to the spectator.

Mr. Dollar next attempts to fasten on me a charge of betrayal of confidence, saying that I used information obtained in committee! This appears on the face of it rather serious, but if I reply to Mr. Dollar's accusation that I was not a member of the committee—then I fear I have pricked the bubble and spoilt the solemnity of his tragic utterance. It is rather a shame to do so, I confess: the italics had rather a melodramatic effect; still, one must be honest. The information I used was the common property of the Council and I was quite justified in using it—nay, bound to use it in self-defence.

Mr. Dollar concludes his letter with a venomous, almost savage, attack upon my character as a private citizen. This,

I am thankful to say, I can treat with tranquil disdain. I have stood prominently forward in the public view for nearly 40 years as a surgeon, a teacher, a writer and—yes, it is true, I have actually taken my share of political burdens, but I did not know, till Mr. Dollar told me, that that was a crime.

The following letter, addressed to the editor of the *Veterinary Record*, is the one to which I have referred above:—

SIR,—My neglecting to read your esteemed contemporary, THE VETERINARY JOURNAL, has hitherto prevented me from suitably acknowledging the too flattering prominence given to my name in its editorial pages for January.

Professor Williams has a grievance, occasioned apparently by the refusal of the Examination Committee to accept divided or incomplete matriculation certificates despite the fact (as defined by Professor Williams) of their having intimated "such certificates would be accepted as evidence of fitness whether they had all been obtained at one time or not." Paraphrases are dangerous, however, and that this particular paraphrase is a deliberate misreading is shown by Professor Williams' later quotation, "It does not matter to the Council *how* or *when* they were obtained"—an entirely different matter.

Until a candidate enters a teaching school, the Council of the R.C.V.S. has no power whatever over him; it cannot therefore say either *how* or *when* he shall attain his certificate; but it can and does control its own examinations, and it does say that, unless the certificate tendered shows all the subjects were passed at one time, it will not admit the holder to his first professional examination. Surely this was very clear, and if not, should here become so by pushing the argument a little further. The subjects must either be passed at one time, or they must not. No one has suggested they should be passed at twice, or thrice, or ten times; hence, if they are not to be passed at once there is absolutely nothing to prevent a student offering fifty certificates and taking twenty years to matriculate. To bolster up this view, we have even been gravely told that the man who passes subject by subject is as good as one who passes all at once. The suggestion scarcely requires refutation. If the student remembers his first subject when he comes up to pass in his second, why should he not pass in both (or all) together? The answer is, that the class of student now in dispute cannot—he has forgotten his first. But he should be passed, say Professor Williams' disciples, because he once knew them. We are in short to accept him not for what he knows, *but for what he has forgotten!*

The Examining Committee refused to be converted to this startling doctrine—hence the injustice. It must be a very grave injustice, for though he introduces it with "some hesitation," and a feeling that "the matter may seem to be to a certain extent a personal one," Professor Williams sees in it what "may go on in process of time to become a national disaster."

For some time past those of us who resist the efforts to degrade the examination have been the subjects of all the well-known methods of depreciation so dear to the heart of the less refined sort of controversialist, but it has been reserved for Professor Williams to specially distinguish himself in this industry, and, by the use of information obtained *in Committee*—information which all laws of honour regard as confidential—to establish a new, if somewhat unenviable record.

"It appears that the motion was made in Committee by Mr. McFadyean, and seconded by Mr. J. A. W. Dollar, but as Mr. Dollar was not a member of

the Committee, his seconding was pronounced incompetent by the Chairman. Are we to suppose that this was a mere mistake on the part of Mr. Dollar, due to his youth and inexperience?"

The Committee did not resent my mistake and, indeed, invited from me an expression of opinion. It is, then, scarcely necessary to reply to such accounts of my enormities, except to indicate the spirit in which they are advanced. Mistakes are unavoidable, and if I am indeed so young and inexperienced, the accusation carries its own excuse, while I may at least hope to prove one of those whose follies cease with their youth, and not of those who prefer dark ways to light in spite of age and experience. Whether youth may fairly be imputed to anyone as a reproach I must leave to others to determine, but my accuser, who has passed a long life in politics, can neither claim it as explaining his employment of confidential information, nor his forgetfulness of the dignity of an editorial position.

JNO. A. W. DOLLAR.

THE COUNCIL AND THE EDUCATIONAL EXAMINATION.

BY W. F. BARRETT, F.R.C.V.S.

I DESIRE to offer a few remarks on the letter of Mr. Dollar which appears in your issue of the 8th inst., and further to explain why the Council has fallen into such confusion over the education question.

In respect to Mr. Dollar's communication, I think it will be generally regretted that it is of such a personal character, because Professor Williams and he will meet again on this subject at the same table, and it will be difficult for them to debate the question in the calm manner which, in the interest not only of the profession but of the student, it is desirable to do.

I think it only fair to Mr. Dollar to say that he was invited, like myself, to offer an opinion on the subject, and he no doubt quite inadvertently seconded Professor MacFadyean's proposition.

Mr. Dollar loses sight of the fact that, whatever he or others may desire, the Council and students are bound by Bye-law 52, which in effect places the Veterinary in the same position as the Medical Student, in respect to the resolutions of the General Medical Council. By these resolutions he is bound, and it is manifestly incorrect to say that by the recent decision of the Council the standard of examination has been lowered, or that the examinations of our students differ in any respects from those of the sister profession. One is almost tired of pointing out that the question as to whether the student who passes his examination in parts is better or worse than he who passes in all subjects at one and the same time is altogether another matter, inasmuch as the bye-law must be adhered to, though the entire Council be opposed to it.

If certain gentlemen object to the bye-law, let the Council

discuss and, if desirable, alter it; instead of this, however, there is a manifest desire to twist the bye-law to meet the wishes of a minority of the Council. If I am not asking for too much space, I will endeavour to explain the resolutions of the General Medical Council, for the profession would be sorry to learn that these were being swerved from either in respect of leniency or undue stringency.

The resolutions are divided into two parts which I shall denominate A and B.

Regulations A provide for the registration of students who possess approved certificates [as, for example, those of the Scottish Education Department, mentioned above.—ED.]

Regulations B enable a student to be registered who has passed what is termed the preliminary examination in general education, and it will be observed that the two modes of registration are entirely distinct. The confusion of certain members of Council has arisen from a non-observance of this simple fact.

In regard to the resolutions under the first head—viz., the possession by the student of approved certificate—the examining bodies who grant these certificates are divided into four divisions. Practically, the first schedule to Bye-law 52 in our register comprises examining bodies in Division I., and therefore it will be sufficient to treat of this, remembering that II. and III. are precisely similar as regards the passing of the examination.

The regulations, before enumerating the approved bodies, say:—"The examinations in Divisions I., II., III. at present entitle to registration on production of satisfactory evidence that the applicant has passed them." These words, which I have fully and correctly quoted, were no doubt inserted for the very purpose of explaining that in these divisions the mere production of the certificate was sufficient. This is most palpably evident for two reasons—one in Division I.: the University of Wales is cited, and the General Medical Council, not feeling assured of the standard of this examination, expressly state "the whole of the examination to be passed at the same time, and to include one of the optional subjects required by the Council." In Divisions I., II., III., there are given no less than 51 examinations, the certificates of which will be accepted, and in only one instance—viz, University of Wales—are there any directions as to how or when the examination shall be passed. Can any intelligent man fail to mark the signification of that special direction?

The second reason I shall give is even still clearer, if that is

possible. Division IV. comprises certificates of Indian, Colonial, and Foreign Universities and Colleges. The General Medical Council in dealing with this division, have appended this direction, "No certificate from the bodies in the foregoing Section IV. will be accepted after October 1st, 1895, unless it states that all the subjects of examination have been passed in at one time." What is the effect of these directions? Why, clearly this—the General Medical Council says, in Division IV., the mere production of the certificate is not sufficient; the standard of this examination is somewhat low, and in consequence we shall compel you to furnish evidence, not only of your having passed, but that you have passed at one and the same time.

Now, as to resolutions under what I have termed B.

These resolutions relate entirely to the "Preliminary Examination in general education required to be passed previous to the commencement of medical study." Of course, students possessing any of the foregoing certificates will not need to pass this examination. I need not enumerate the subjects of this examination; they are too well known. The General Medical Council, in order to make this quite plain, has appended the following directions:—"The Council will not in future accept any certificate of pass in preliminary examination in general education unless the whole of the subjects included in the preliminary examination required by the Council for registration of Students of Medicine have been passed at the same time."

A mistake has been made by some members of the Council as to the precise meaning of this direction, and, incredible as it may seem, they have confused the meaning of the words "preliminary examination" by extending them to all the examining bodies in the four divisions. The General Medical Council, as if to make this point doubly clear, says, under Resolutions B, "The preliminary examination in General Education shall be as follows," thus strictly limiting the use of the words to the special examination of the Council, and in no other way are these words used.

To summarise, the directions are as follows: "Students who possess any certificates in Divisions I., II., III. (excepting University of Wales) are entitled to registration without inquiry; those possessing any certificate in Division IV. must show that they passed all the subjects at the same time; and, lastly, a student who possesses none of these certificates must pass the preliminary examination at one and the same time." . . . .

In conclusion, I have but to say that if Professor McFadyean's ideas be decided upon, you will place the examination of the Veterinary student far beyond that of the Medical. Do you desire this? I think not, and I shall accordingly do my best to keep the education where it is, and where the profession generally desire that it may remain.

Proceedings of Veterinary Medical Societies, etc.

SCOTTISH METROPOLITAN VETERINARY MEDICAL SOCIETY.

THE ANNUAL MEETING of the Scottish Metropolitan Veterinary Medical Society was held on Wednesday afternoon, 26th February, in the Clarendon Hotel, Princes Street, Edinburgh. Mr. John Cameron, Berwick-on-Tweed, President of the Society, occupied the chair, and among those present were Principal Williams, Prof. W. O. Williams, Prof. O. C. Bradley, Prof. McCall, junr., Glasgow; Dr. Ivison Macadam, Edinburgh, Capt. Appleton, Inniskilling Dragoons; Messrs. R. Rutherford, Edinburgh; A. Spreull, Dundee; W. Anderson, Glasgow; Gordon Frew, Glasgow; Colin C. Baird, Edinburgh; J. McLauchlan Young, Dundee; T. W. Inglis, Forfar; J. Connochie, Ayton; W. Hepburn, Coldstream; Peter Moir, Edinburgh, Hon. Secretary; W. Lothian, Duns; J. Aitken, jun., Dalkeith; J. Storie, East Linton; D. Young, editor of the *North British Agriculturist;* and Messrs. Ferguson, Locke, and Williams, visitors.

Apologies for absence were intimated from Mr. Andrew Hutchison, Beechwood, Perth; Mr. Harry Thompson, Aspatria; Mr. James Clark, Abbeyhill, Coupar Angus; Mr. A. Seton Milne, East Linton; Mr. James Thomson, Aberdeen, President of North of Scotland Society; Mr. Charles Cunningham, Slateford; and Mr. Robert McNae, Maxwelltown, Dumfries.

Mr. R. RUTHERFORD, Edinburgh, nominated the following gentlemen:—Mr. Braes, Linlithgow; Mr. Donaldson, Dollar and Mr. Lothian, Duns.

The Council of the R.C.V.S.

Mr. R. RUTHERFORD, Edinburgh, called attention to a matter which he said should be taken up by their Society. It was high time that Scotland was represented on the Council of the Royal College of Veterinary Surgeons, quite irrespective of those who had a seat through their position in the schools. Scotland was not wanting in many capable men who could worthily hold this honourable post and it was not fair that the honours should be entirely relegated to gentlemen on the other side of the border. He thought a small committee might very well be appointed to select two or three gentlemen who would be willing to act as a member of Council. There was no time to lose, for the nominations would be made very shortly, and the elections would take place early in June. It was really time that they had someone on the Council from their side of the Tweed.

Principal WILLIAMS said he had thought this matter over, and it was his opinion that they should select a candidate for the Council that day. He cautioned the members, however, that if whoever they appointed did not attend the meetings in London, they might as well not be elected at all. It was not every man in Scotland who would go to this Board. They could not afford either the time or the money.

Mr. RUTHERFORD said he was prepared to nominate three gentlemen, although he did not know whether they would accept. Any one of the three could fairly represent them in the Council.

Mr. MOIR said Mr. Rutherford's motion was well worth seconding. The time was so short that steps should be taken immediately to approach someone on the subject.

Mr. RUTHERFORD said they must bear in mind that since the restoration of members' rights under the ninth clause, there was no bar to members acting on the Council. He nominated Mr. Cunningham, Slateford, as representing the southern part of the country; Mr. Robb, Glasgow, as representing the west; and Mr. Thomson, Aberdeen, as representing the north. Either of these gentlemen would make an exceedingly worthy representative of Scotland at the present time.

Mr. MOIR suggested that they should add to that number two well-known men in the profession, Mr. Spreull, Dundee, and Mr. Hutton, Kelso.

Mr. RUTHERFORD pointed out that what they wanted were men of some individuality on the Council, men who would not simply go and sit and do as they were told, but men who would do as they thought. With regard to the five gentlemen who had been nominated, he supposed that if the whole of them agreed to act they would simply require to ballot.

Principal WILLIAMS suggested that the Secretary should write to these gentlemen, and if they got one out of the lot to act he would do very well.

Professor W. OWEN WILLIAMS suggested that the easiest way out of the difficulty was to ballot for the five names in the meantime, and whoever had the largest number of votes should be asked to represent them. If he declined, the gentleman with the next highest number of votes should be approached.

This met with the approval of the meeting, and on a ballot being taken it was found that Mr. Cunningham, Slateford, had the highest number of votes, Mr. Hutton, Kelso, being second.

The President's Address.

The PRESIDENT then delivered his address, which was as follows:—

Gentlemen, my conscience has grave doubts whether I am not guilty of monopolising this honourable position by assenting to occupy it another year. I fear my defects may detract from the success of our Association. However, I feel very highly the honour you have again conferred on me, and will do my best to be useful in maintaining the honour and usefulness of our Association. Another year has sped its rapid flight during which "old time has dealt very leniently with our membership as well as with the prominent members of our profession."

At this time last year we all felt that our profession had sustained a great loss by the death of Professor Walley. Recently, as you will be aware, it has been decided to do something "in memoriam," and the necessary means are now being solicited and collected. Some persons have good talents, but they do not cultivate them, and have never any to spare or give away. Others cultivate them, but they are so selfish, they never have any to spare except at a great price. Professor Walley was the very opposite of both these classes. In the pursuit of knowledge, he was assiduous to gain that he might bountifully distribute. He lived and died for the profession, and I hope—I feel sure—that everyone will contribute cheerfully, according to his ability, towards the proposed Memorial. On such occasions as the present, and had I been a member of the Council, it would have been quite natural that I should have gone into professional politics, and given explanations and opinions on controversial points. But I think I should leave that to some member who is personally, or, at least, more minutely acquainted with particulars than I am. Further, I think it is not only the duty of our representatives to explain and obtain our ideas on such subjects, but it is equally our duty to attend and hear such deliverances, and to take a lively interest therein, and assist our

legislators in shaping a policy which will always be honourable and beneficial to all. There are, however, one or two points which I think we would all agree upon. I have often mentioned the ridiculously short time allowed us to consider whom we should vote for as councillors compared with the long time allowed to the Secretary to count the voting papers. The candidates are often complete strangers to us, both in person and in ideas, and we have no time allowed us to write and enquire of any one. Why do we not take means to remedy this evil? As an association I think we should have one or more members appointed as guides to whom we might refer; or, who with the Secretary, might inform us regarding the candidates for office.

I observe with pleasure a movement which I hope will develop for the better recognition and equitable treatment of our profession by the Government. I shall be very pleased if someone will move that our Secretary be asked to draw up a petition in favour of the same from this Association to the Government, and have it forwarded. I am sure no one can question the special claims of Scotland, or of Edinburgh in particular, to a proportionate amount of any grant which may be made from any national source in furtherance of veterinary science. Nether can anyone question the need for further research into various animal diseases—researches which so far, at least, must be conducted locally, and which require more time and money than the ordinary practitioner can either spare or afford to give.

Tuberculosis.

Regarding the subject which has most prominently engaged our attention during the past year, viz., tuberculosis, I think our efforts have been as successful as could have been expected. Although I was rather disappointed to see some others take such a selfish, mercenary view of this great cause, I hope every one of us will consider the subject as being still before us and in an urgent condition, requiring the constant application of both head and hands. Some years ago we were expected to fall in and believe that foot-and-mouth disease had become indigenous. Now we are expected to believe that there is no real heredity in tuberculosis, and only one case of its fœtal development; that milk from the affected cow is the cause. The public know better than to believe all that. Where is the intelligent person who cannot recall to memory parents who were, one or other of them, of tuberculous generation? Never very robust, yet never acutely affected, they have lived to a fair age. In other cases the parents have always been, and yet are, as vigorous persons as you could desire, and their family grew up the same until of age and upwards. In a few years how many of the family have rapidly succumbed to tuberculosis? Has the public not known for many, many years that it sometimes passes latent in one generation and breaks forth very acutely in another? We have isolated the germ of tuberculosis and transplanted it, etc., but where is the veterinary surgeon or professor who can tell us its whole natural history, pathology, and peculiarities? There is, however, one aspect of the subject about which there is no doubt, viz., the badly diseased condition of many cows which supply the public with milk. Again, I repeat it is our duty to make public *post-mortems* and show the public the sources of their milk supply and the inspection farce which prevails in many places. I am very pleased at the energetic way in which Edinburgh has treated her milk supply for some time. I beseech every one to lend a helping hand. There is yet much to elucidate and learn of this subject, and if the present generation do not reward us, we will not be treated any worse than many others who have only been acknowledged by succeeding generations.

The Government and the Profession.

The treatment which our profession continues to receive at the hands of

the Government and of many local authorities is, to put it mildly, very mean and disrespectful. I think we will only be doing our duty if we combine, to a greater extent than we have ever done before, in claiming a fair share of recognition and reward from the managing departments of the nation. In the past we have allowed the gentleman amateur, the sanitary inspector, the chief constable and even the serjeant of police to elbow us out of our legitimate sphere of influence and employment. Also, although we have no hand in the constant changes which taken place in our Contagious Diseases Animals Acts and Orders, both Imperial and local, the public do not know it. And our value is very much lowered in their estimation. And no wonder our old subject "Canadian pleuro" has been resting. The noisy minority has been damped down and with the assistance of the new Minister of Agriculture they are soon to be extinguished. The fickle majority thought they would be all right when they got the Malt Tax abolished; now it is Canadian pleuro and stop the importation of cheap store animals. What will it be next? After reading Mr. Long's remarks when introducing his Diseases of Animals Bill I felt it would be impossible for anyone to say, what next? Such a bundle of absurdities I have rarely seen. I hope you have all read them. However, he certainly finishes up very accommodatingly. "It was therefore undesirable to continue the present state of uncertainty in the minds of those who believed themselves to be prejudicially affected." After that, if he knows anything about logic or consistency, we should be able to get an investigation into the nature and reality of Canadian pleuro. The Canadians only require to repeat his own words. In pleuro-pneumonia the veterinary profession is entirely ignored. The importation of pleuro-affected animals from abroad has been the great cause. The killing of all imported animals has been the cure. (How many infections took place from Canadian pleuro?) Perhaps Mr. Long may also be able to explain and reconcile, why it is that store cattle of all ages continue so scarce and dear, seeing that they have had protection for some years, and he could not imagine any Minister of Agriculture proposing to remove these (protective) restrictions." Cattle during these years were never before so free from contagious diseases. Compare that with the supply of home-bred swine. in which, during these said years disease has been rampant, and until quite recently on the increase; yet, notwithstanding, pigs and pork, home-bred and fed, were never so plentiful and cheap as at present. It is only a short time since another important authority told us that the regulations did not affect the increase or decrease of breeding; it was simply a question of supply and demand. Is cattle an exception to that rule? Do they really require protection? Is it too much to ask them to trust in the regulations, which are said to have worked splendid results? The answer is—They are afraid to trust; fear, without a reasonable basis—a grand foundation on which to pass Acts of Parliament. He also says, certainly the price of meat had not gone up since the restrictions, &c. Was such a thing ever expected? If you cause irregularities and gluts in the supply, can you expect prices to rise or even show a good average? Surely not. The middle men know how to manage these circumstances. The "fickle majority" of landlords, agents, and gentlemen farmers may vote for anything but coming in contact with the *bonâ fide* arable land cattle-feeding farmers. I say, take a poll of the said farmers at any auction mart or store cattle market from Banff to Alnmouth, regarding the Board's policy, and Mr. Long will soon find that his "overwhelming majority" is a paper one. There is no need to take up the time of Parliament mending a two-year-old Act which gives all the powers required. The breeding farmer is to get real protection, the arable land, cattle-feeding farmer has no alternative but buy dear and sell cheap, or put some of his land out of cultivation and try to breed for himself. What will the agricultural population say to that? Is that the way to keep the people in the country? In the meantime, what is the cattle-feeder to do?

I observed with pleasure last week the appointment of two local veterinary inspectors by the County Council of Aberdeenshire. I am glad to see they still keep the county under proper inspection. Different from another large county I know, where only one veterinary inspector is considered sufficient to fulfil the law (the letter—not the spirit), and a few months ago he travelled about seventy miles—single journey—to inspect a "pleuro case"—a medium case of tuberculosis—still alive and like to be.

The Diseases of Animals Acts do require amending, and the places where there are visible holes should be darned first. Dr. Farquharson and Sir John Long may not get a numerical majority, but they can easily get an overwhelming, logical, commonsense one.

Objects of the Association.

In recent conversation I was asked what was the chief object of our Association meetings. I expect an answer such as—"For the mutual higher development of our veterinary knowledge and ability to cure disease in the animal world," would be considered fairly near the mark. But the interrogator replies, "Is it not true that 'Prevention is better than cure?' What are you doing in that way? Is the knowledge and advice which the veterinary lecturers give to the agricultural world likely to bear good fruit either to the owners of animals or to the veterinary profession? Or is it a case of a little knowledge being a dangerous thing?" I once saw and heard a notable horse-tamer give lectures and demonstrations, but he said he could not give us the eye to observe and the wisdom to decide when and what particular plan was decidedly best for particular cases. What is best at one stage and for some dispositions would be very unsuitable for others. The successful application of veterinary knowledge is always on these lines, therefore, I fear much of the advice both oral and in book form is of comparatively little value to ordinary agriculturists. But to instruct owners of animals in the principles and advantages of "Prevention," and show to them the great progress and real benefits which are to be derived from putting it into actual practice—"That a stitch in time saves nine," and that "prevention is better than cure," I am sure would be giving them magnificent value. For instance, just think of the deaths which take place from tetanus every year, especially in some districts. The loss from that cause alone would pay the services of the veterinary profession twice over to attend every case of external wound, however small, and give it, not only the proper antiseptic treatment, but also sanitary surroundings and internal treatment on the most recently discovered preventive methods. Also, how many cases of parturient apoplexy could be prevented if owners of cows would apply to their veterinary surgeon for one or two doses of suitable preventive medicines and advice how they should be treated at that time. Think also of the large important subject of abortion. Have we not in that particular subject—for our own honour and benefit—been a little slow. These are only samples of the good that might be done by prevention.

But whether it be prevention or cure it requires everyone to keep fully abreast of the recent, I may say every-day discoveries in scientific knowledge, and its practical application. It requires every one of us to be constantly enquiring and learning, learning not only the theoretical facts, but also, if possible, to make ourselves conversant with their practical application. For the latter purpose I think associations should have, if possible, in connection with their periodical meetings a greater amount of practical demonstrations. To make our meetings attractive and useful the first and main thing must always be attendance, and the will to give as well as the desire to receive. I think "present cases" in which any member feels any difficulty or want of success, should come first on the agenda after routine

business. Then we would have opportunity to give our experience and advice to everyone requiring it. At present we leave that part too much to the end of the meeting when there is little time or few members remaining. A chorus of thought, I have no doubt, replies that the animal world has had far greater practical results obtained for it, both in the form of eradication and suppression of disease, than in the human world, and that it is becoming a question of veterinary existence. So far, true; but the higher education of all mankind inculcates—claims—a full surrender to duty in its most complete demands and without being trammelled by the anxieties of reward or consequences. We may depend on it that when one door closes, another will open if we are worthy. Gentlemen, this is our annual meeting and I hope we will have time to hear everyone on any and every subject which he thinks will be of benefit to anyone.

Mr. T. M. INGLIS, Veterinary Surgeon., Forfar, read a paper on results of several cases of

"CRYPTORCHID CASTRATION."

Mr. PRESIDENT AND GENTLEMEN,—The subject I have the pleasure of bringing before your notice to-day is the "results of several cases of cryptorchid castration," a subject I am sure you are all interested in, especially the country practitioner whose daily work is among all kinds of young stock, and who frequently comes across colts of the cryptorchid nature in his practice. When we meet with cases of this kind you will all admit that it presents a very annoying aspect to the practitioners as well as an unsatisfactory state of affairs to clients when the operation cannot be completed.

In my own district a very large number of young stock are reared, and I was frequently annoyed at not being able to castrate cryptorchids. After studying the matter carefully I resolved to make an attempt to operate on a three-year-old Highland colt, but had bad results. I was by no means satisfied with the cause of this animal's death, although I have no doubt the owner and his servant think it due to the operation alone, but after you hear the history you can judge for yourselves what you think might have caused death.

I consider this death gave me a lesson I shall never forget when dealing with such colts, and one which I am sure has been the means of helping me in these operations since. This case was that of a "single riglin," the retained testicle being found in the inguinal canal and of a peculiar shape. It resembled two oranges adhering to one another, each section containing a good quantity of fluid, the cord itself being exceedingly thick and short. I had a great difficulty in dissecting out the testicle to reach the cord, owing to the strong growth of fibrous tissue over the opening and testicle. I was afraid to remove the gland with the ecraseur owing to the immense thickness of the cord, and resolved to apply a caustic clam which was done, and the animal released and made comfortable.

The loose box where the patient was placed was in itself suitable and very comfortable, but it contained a window that opened into a cattle court, and directly opposite this was the door, which opened in two sections. Of course, before leaving I had the window closed as well as the door, and left orders that they were not to be left open. On my arrival at the farm on the third day I was surprised to find the animal standing with his head leaning over the under half of the door, the window open, and the men busy emptying the court behind; the steam from this court was playing through the window, filling the box and streaming out of the door. It was an exceedingly warm day, and the man in charge thought he was doing no harm when he opened the upper half of the door and also the window which was directly opposite.

This was a very awkward condition to find a patient in, especially one of this kind. After I had given vent to my feelings I examined the animal and found his temperature about 105°, but the wound itself did not present anything unusual, and, notwithstanding the elevation of temperature, he was eating fairly well. From what I had seen, however, I made up my mind for a fatal termination. Next day I saw the colt and removed the clam, cleaned out the wound with an antiseptic lotion, and bathed the parts well.

Having talked pretty plainly to the stableman the day previously, I now observed that he had turned sulky and careless, and did not seem to care whether the colt died or not. This was very annoying, as I could not visit the animal more than once a day, the distance being more than ten miles from my residence. When I called next day I found the colt swollen to an alarming extent and purging slightly; the temperature still elevated, but the appetite remained unaltered. I ordered plenty of hot fomentations from the first and also dressed the wound daily, but to no purpose. This treatment was kept up until his death, which occurred on the sixth day after the operation. I did not get an opportunity of making a *post-mortem* examination, but was of opinion that death was due to *septic peritonitis*. Although my first attempt to castrate colts of this nature proved unsuccessful, still I was not inclined to think that death was due to the operation itself. Some time after this first case I came across several cryptorchid colts, but hesitated operating until I was strongly prevailed upon to do so. I got every encouragement from my clients and also from the Horse Insurance Company, who were willing to take the risk at a very moderate premium. I got loose boxes specially prepared at my own yard, and had two subjects sent in to me at one time. The first was that of a harness cob, rising three years-old, with the near side testicle missing. I cast him as I usually do, on a small grass park, put him on his back, and operated in the usual manner. I explored the inguinal canal but could not find anything resembling a testicle, and therefore had to work my hand gradually through the inner ring into the abdomen. Finding the testicle or spermatic cord, in my opinion, is always the most difficult part of the operation for the unpractised, and when my hand entered the abdomen in this case and no testicle to be found at first, I must confess I felt a little put about. I continued my search throughout the cavity and was rewarded, after struggling for nearly an hour, in findingthe gland floating at one side near the rectum, the patient, of course, being on his back. After grasping a firm hold of the testicle I brought it through the opening with very little difficulty, and then removed it with the ecraseur. After stitching the wound and removing the other testicle, we allowed him to rise, and, although a little stiff, he walked into his box and soon settled down. We got out the other colt, a strong Clydesdale, rising three, with near side testicle also missing. Failing to find any trace of the testicle in the canal I had to penetrate the abdominal wall. In this case the bowels were nearly empty, and the animal was otherwise in a better condition for operating upon; therefore I had very little difficulty in finding the retained testicle, which was lying about the same region. Both these animals made a good recovery, although the first one operated upon began to swell a little in the groin after he had healed up, but after a few days it disappeared, and he is now doing well. The Clydesdale one did not swell much, and very little discharge came from the wound. Of course, I saw them several times daily, and paid strict attention to the surroundings and diet.

Encouraged by both these cases being a success, I did not hesitate to operate on such animals again. The next case I had was that of a half-bred colt, rising three years old, with near side testicle missing. After making the

incision and passing the fingers through the connective tissue, I found the testicle lying in the inguinal canal, which made the operation very simple, being, in fact, just like ordinary castration. I did not stitch the wound in this case, but this colt also made a good recovery. Since then I have operated on a good number of animals of this kind, and have come across some very peculiar testicles. In my experience it is quite common to find retained testicles diseased, and this past summer I had occasion to have two in one week affected very similarly. The first case was that of a colt, 2 years and 5 months old. After casting and making the incision, I introduced my hand, explored for a very long time, and with much difficulty found something resembling a testicle, although extremely large and soft. Several times I felt this abnormal-like gland, lying over against the right kidney, but was not inclined to think I had found the testicle. However, after a considerable time, and finding nothing else resembling that, I set to work to get it through the opening. I brought the cord out first (double), and pulled gently with one hand, then pressed my other hand in between the testicle (which the traction had now brought to the abdominal opening) and the ring, and so manipulating it, managed after some time to get it out. The cord was very long and strong, and the testicle quite as large as an ostrich's egg. The veterinary surgeon of the district, a very old gentleman, was present to see the operation, and when I brought this bladder-like testicle to view, he shook his head and told me to take care. I turned it over two or three times, and finally discovered the "epididymis," but this and the cord were the only remaining parts of the testicle. Finding the bladder all right in the pelvic cavity, I removed the testicle and stitched up the wound. The colt rose to his feet, and although very stiff and staggery, was able to walk into his box. I left him for a few minutes, and when I went to see him again, was astonished to see the intestines appearing between the stitches in the wound. Not wanting to alarm the owner or the others, I said it was nothing serious, and made preparations to have him cast again. Whenever he moved, the protrusion seemed to be gradually growing larger, necessitating my casting him where he stood. Although he showed symptoms of great pain, he was not difficult to cast. I got him on his back, washed and bathed the protrusion, and then reduced it carefully into its normal position, restitched the wound and allowed him to rise. In about half-an-hour he took a chilled drink, and was not long before he settled down. The vaginal sac contained about 14 ounces of fluid, and a very imperfectly-developed testicle.

The second case was that of a colt, sixteen months old, with off-side testicle missing. With this one I had not so much difficulty, as I readily found the testicle, which was lying in the pelvic cavity beside the bladder. Although firmly adherent, it was not difficult to get out. This testicle was very much smaller than the former one, and, therefore, did not offer so much resistance when getting it through the ring. I am glad to say both these colts made a perfect recovery. I sent the smaller testicle of the two to Principal Williams and he informed me that it contained $4\frac{1}{2}$ ounces of serous fluid and an atrophied, though apparently normally constructed testicle.

Another animal which I operated upon was a powerful three-year-old pedigree Clydesdale with one testicle missing, the other having been removed when a yearling. I had considerable difficulty in finding the testicle in this case, and when found I could not get it separated from the omentum within the abdomen. I seized a firm hold of the testicle and omentum, pulled both through the ring, separated the testicle, removed it and returned the omentum. This animal also made a good recovery and is now a valuable gelding. In the majority of my cases the testicles have been within the abdomen itself, very few of them being in the canal. I have found some of them adherent to the

inner ring, and when an attempt was made to get hold of them through the ring they would lose their attachment and drop down amongst the bowels, but as a rule they were not difficult to recover. The great majority of retained testicles certainly appear degenerated, and if they are found normal in size, they are flabby in texture, and wanting the usual tensity.

I prefer to castrate cryptorchids in the summer time as I have had best results then. I select that season because in a country practice the spring work is over, and anyone who has a practice in a large breeding district will know what spring work means. With foaling, calving, or removing a fœtid afterbirth it is almost impossible to keep the hands safe, no matter what is used to cleanse them. In my opinion the condition of the hands is of more importance than the weather. We can alter a stable or box to suit the weather, but I never feel safe for at least two days after handling fœtid material. I am extremely particular with the box the animal is to be placed in after the operation. I usually issue orders to select a box as far away from a cattle court as possible, and to be sure that no artificial manure has been in it for some time. After the box is selected I order it to be thoroughly cleaned out, whitewashed, and the floor sprinkled with a coating of dry lime. This is usually done a few days previous to the operation. On the morning of the operation a good bed of sawdust is put into the box. I always make the bed of sawdust as it gives the box a sweet smell, and a deodoriser can easily be mixed through it if necessary. I like, if possible, to get pine sawdust; but it cannot always be got in a country district.

Castration of cryptorchids requires some practice and very careful antisepsis. I am exceedingly careful to observe the strictest cleanliness of the hands, instruments, and surroundings, and refuse to operate unless my orders are fully carried out. I would rather disappoint the owners of such animals by not turning up at the appointed time than run the risk, if I were not sure of having clean hands. The animal is prepared three or four days previous, and the bowels kept as empty as possible. When the animal to be operated upon is being brought out, particular attention should be paid that the man leading him does not take him through a wet cattle court or other places where he may get his feet and legs into a very dirty condition. This is very annoying when securing the feet, it being impossible to avoid soiling the hands. I always cast with a rope, and secure the animal when down with a large broad belt to each hind leg, the fore ones being secured in hobbles attached to a girth round his middle. I prefer brown leather strappings and the rope to black hobbles and chain, because in adjusting the former the hands can be kept clean, which, as I have already remarked, is the most particular part in aiding the operation.

Finding the testicle, as a rule, is extremely difficult; but if the operator has a small hand, it makes it easier for him to penetrate the canal. Sometimes it is difficult to distinguish a loop of bowel from the testicle, but the testicle can be known by its firmness and sharper outline. It is rather a strange feeling when exploring the abdomen to feel the different pulsations and organs, knowing that, by accident, one might be ruptured and cause immediate death. However, after performing on a few and having been successful, one gets over this slight nervousness, and becomes quite bold at the operation.

After the operation I stitch the wound with strong tape, taking good deep holds and remove them whenever I think it is safe, usually about the third day, but, if the operation has been severe leave them longer. I do not like to confine the wound too long, but am anxious to get the stitches out as they must irritate, cause swelling, rapid closing of the wound, and confine the discharge. I wash the wound several times daily with an antiseptic, and if the parts swell I open the wound a little, but not unless. After the operation the patient invariably exhibits symptoms of colic, but it soon passes off. He may also shiver a good deal when he cools down, and when this appears I

always have him covered. The day after the operation he is generally found standing with his hind quarters in a corner and usually scraping with his fore-feet a good deal. He may stand in this position for a day or so without moving much. On the third and fourth day I usually find an elevation of temperature, but about the fifth day it begins to subside again. If it does not, then I know I should open up the wound well. As a rule little or no pus is formed, but should it appear I always see that it gets free escape. In some cases I have seen slight lymphangitis on the side operated upon but it passes off in a few days.

A great many opinions are formed about the cryptorchid condition being hereditary. Experience has taught me that it is undoubtedly hereditary. I have invariably seen and heard of cryptorchid horses leaving their stock the same. The colts I referred to being similarly affected were both after the same horse, and this horse left a good many more of the same kind. This horse, however, I believe was right enough himself, although I am told his sire was a cryptorchid. I have tried to put together these disjointed notes which have been formed in the midst of other duties, and have given my actual experience of this form of castration.

The PRESIDENT, in inviting a discussion upon the paper, said he was sure they had all listened with pleasure and profit to Mr. Inglis' remarks. This was a subject which was comparatively fresh, and afforded plenty of scope for discussion.

Professor MCCALL, jun., said he had listened with very great pleasure indeed to this paper. He was sorry to say that up to the present he had no experience in this subject. He intended, however, next summer to see one or two cases. At present a friend of his was looking at some cases, and he would bear in mind the remarks of Mr. Inglis in regard to the operation, and if he was as successful as Mr. Inglis had been he should be very pleased indeed.

Mr. STORIE, East Linton, said he had had no experience of these cases at all, but he had listened with great interest to the paper, which showed that any veterinary surgeon might make the attempt at any rate to perform this operation.

Mr. ANDERSON, Glasgow, thought Mr. Inglis had so thoroughly exhausted the subject that very little could be added. He considered the antiseptic treatment which Mr. Inglis practised was the right one.

Mr. FREW, Glasgow, was very glad that he held a city practice, for there was a great deal of trouble with animals of this kind in country practices.

Mr. BAIRD, Edinburgh, said he had long been in practice, but he had never operated in such cases. It would be a very laborious time in the spring if these operations had to be performed then. He was very glad to hear that the operation was becoming so popular, because at one time Farmer Miles was the only one who was supposed capable of performing the operation.

Mr. SPREULL, Dundee, said he had never gone into this operation, but the description which Mr. Inglis had given corroborated anything that he knew of the subject.

Professor W. OWEN WILLIAMS related an experience which he had last summer. He had to operate upon a colt which had only one testicle, and this was a very large one indeed. They decided to try and find out the one that was concealed. He made an incision down by the inguinal canal, and after some trouble introduced his hand. The friend who was operating with him inserted his hand at the rectum, and several times they felt each other's hands. As a matter of fact, he did not find the testicle they were in search of. He operated for fully half-an-hour, keeping the colt under chloroform. He felt his liver, kidneys, and most of his bowels. He was glad to say that the colt was now doing very well indeed, and, seemingly, he could not have had a second testicle. The other testicle was removed afterwards.

Principal WILLIAMS said he had not had much experience in these cases, although he had performed some operations. He could not say that the operation had turned out to his satisfaction. The operation only showed the liberties they could take nowadays with antiseptic treatment. Operations which could not have been attempted in former times could now be performed with very great benefit and success. Of course they all remembered the time when Farmer Miles came from America to castrate these animals. He did not think Farmer Miles was ever as successful as Mr. Inglis had been. A more complicated system of castration than that of Farmer Miles he never saw. He used among other things a "stent" cross—a piece of wood forked at both ends in order to keep the legs apart. In his opinion it was a bit of American bunkum to throw dust in the eyes of the British public. Other men had followed, and been far more successful than Farmer Miles was. There were still quacks in the world. Not very long ago a colt was operated by one of those fellows in the south of Scotland, and an alleged testicle was sent to him (Principal Williams) for examination. When he examined it he found it was a small gland. The animal afterwards died, and then the real testicle, which had been removed according to the operator, was found adhering to the kidneys. It was an abnormal testicle—one of those peculiar things that they every now and then met with in practice. When a gentleman, like Mr. Inglis, brought a paper before the Society and gave facts which showed he was successful, he was sure they must give him every credit for having improved upon the operation and also for taking every care to perform it antiseptically and scientifically.

The PRESIDENT did not think he could add anything useful at all to what Mr. Inglis had so well said in the matter. Mr. Kitchen, of Belford, and himself had operated upon three or four cases. The first was a two-year-old, and the operation was performed nicely. One of the testicles had been taken away previously. The horse went all right till the following spring, when a secondary abscess took place, which brought him down a bit. The second horse was operated upon shortly afterwards. He was a magnificent brougham horse worth three figures. He was five or six years of age. He was cast with hobbles in the ordinary way. He kept on his feet till the last, and then he made a plunge forward, going on his shoulder, and fell with a flop upon his hind quarters. This animal was put under chloroform. He certainly thought this was an operation which should be performed with chloroform. This horse took more chloroform and was longer affected than any other animal in his experience, either before or since. The testicle was found after some difficulty, and taken away in the ordinary way. After the horse got up he was put into a stable, where he soon afterwards began to tremble, and he looked in an awful condition. They gave him some sedatives and oil. Next day they received a message that the horse was done up, and that it would be dead that night. He could not imagine what could have brought this about, because when they left the horse seemed to be going on beautifully. When he arrived next day at the place they were making the grave. On examination he discovered that in being cast, the plunge which the horse made had ruptured the intestines or the stomach. The owner was perfectly satisfied that the horse had died through an accident in the casting, and not owing to the operation, and he declared that if he had another horse in the same way he would be quite willing to have the operation repeated. The third horse on which he had operated was a three-year-old, and there was nothing extraordinary about him. After performing the opening portion of the operation himself, he could not get a hold of the testicle, but Mr. Kitchen managed to do so. They must bear in mind that although they got in their hand they could not always seize the testicle at once. The fourth horse upon which he operated was a two-year-old, and the operation took

place during the summer before last. The horse was somewhat deformed. He was rather diminutive. He was a little down in the back and a little up in the loins, with a curvature of the spine. He cast the horse and expected the testicle to be found all right. On the side nearest them as he lay there was a very small testicle, and there certainly seemed to be the appearance of a second one. He made an incision and thought he would find the testicle at the end of the inguinal canal. As he could find nothing he went further into the inside and explored for a good while. As the one was so very small he concluded that the other would be even smaller, and that it would be like looking for a needle in a haystack. He did not think there was anything special about this operation with cryptorchids to frighten anyone from attempting to perform it successfully.

Mr. RUTHERFORD proposed a vote of thanks to Mr. Inglis for his admirable paper. He was very pleased that an old pupil of his own had distinguished himself in the performance of this difficult operation. He could not understand how Mr. Inglis got over the difficulty of passing his hand up the inguinal canal and through the abdominal region. In India, he used to experience the greatest difficulty in getting two fingers through the inguinal canal. It seemed to him that either the horses of this country were differently constituted from those in India, or there must be an immense amount of tearing of the parts. He could not imagine how the arm was passed through the inguinal canal and through the ring, unless there was some tearing. He wished to know whether the ring was dilated, or if he tore it.

Mr. INGLIS replied that the ring had to be torn. It did dilate a little, but it gradually ruptured. He did not like to use an instrument at all. He liked to tear it with his hand.

Mr. MOIR corroborated the difficulty experienced in Eastern Countries, to which Mr. Rutherford had referred. In many cases it was only the point of one finger that could be inserted, and a great number of the cases died. Very often in cases of strangulated hernia, the cases were pretty well advanced, especially in a hot country, where the inflammatory process was very rapid. It had always been a mystery to him how they had been able to manipulate in this country the inguinal canal in the way operators seemed to have no difficulty in doing.

The vote of thanks to Mr. Inglis was cordially passed.

The late Professor Walley.

The PRESIDENT called attention to the subscription being raised for a memorial to the late Professor Walley. It was for them to consider what they intended to do, and to give an opinion what form the memorial should take. It had been suggested that the memorial should take the form of a statue, or a bust, or a bursary. Some were also inclined to vote the money to Mrs. Walley and family.

Mr. MOIR stated that the Society had received a circular on the subject from Mr. Finlay Dunn, and it was felt by some of the members that they, as a Society, should give a subscription to this deserving object.

Mr. RUTHERFORD said he had been at one committee meeting, and had raised the question that something should be known as to the direction the memorial should take, but it was felt to be the opinion of the majority of those present that they would prefer the subscribers themselves to state what direction the memorial should take, and, further, that that should not be given effect to until it was actually known how much was subscribed. For instance, he suggested that as Professor Walley was a public man, they should establish a bursary to be open to all the Scotch schools, tenable for 3 or 4 years, as the profession might wish, and payable to whoever might be the best man of the year for the purpose of furthering his medical or

veterinary education. It might take the form of a bust, which he thought was a very unmeaning thing. Probably the wishes of the profession would be best met by something in the nature of a bursary.

Principal WILLIAMS thought the committee were making a mistake. A bust or a portrait would be right enough, if it was a small subscription; but he thought it would be a far better service to get up a large subscription for those who were left behind. He felt that if they went on these lines, more money would be subscribed by the profession.

Mr. COLIN BAIRD, Edinburgh, thought the best thing they could do was to raise a large sum and invest it for Mrs. Walley and family.

Principal WILLIAMS assented to this, as being the best suggestion.

The PRESIDENT thought they need not go further into the subject, and it was unnecessary for him to recommend it more heartily as they were all agreed that they should give something. He thought they might leave it to everyone individually. He did not think they had sufficient funds belonging to the Society to enable them to give a subscription which would be worth distribution by itself. He thought the best course was to leave the matter to each individual.

This was agreed to.

Grunting in Horses.

A resolution of the Lincolnshire Association on the subject of grunting in horses as a decided cause of unsoundness, and as a sufficient reason when detected for the rejection of an animal subjected to veterinary examination, was submitted for discussion, and the opinion of the Society.

Principal WILLIAMS said the subject was one on which there might fairly be a division of opinion. He had known many grunters that remained perfectly sound, and others which had become unsound in their wind. Personally he never thought of depending on the grunt, and Scotch veterinary surgeons as a rule did not depend upon it to the same extent as English surgeons. Each case must be taken on its own merits. He himself in his practice did not depend on the test of "grunting;" he always tested the horse's wind at the same time. A horse which "grunted" might be perfectly sound in wind at the time of examination, although it would probably go wrong in that respect afterwards. In giving a certificate, a practitioner ought always to mention that the horse "grunted" if that was the case. At Tattersall's the stick was the only test. If the horse grunted they rejected him; if not, they passed him. He maintained that this was not a test at all to be depended upon.

Mr. MOIR said that horses which grunted to the stick, although perfectly clear in their wind, were very apt to become unsound, which fact experience had taught those who dealt in them so effectually that their mercantile value was much reduced by it. While he would not say that grunting was a cause of unsoundness, it was certainly an indication of unsoundness, and he would qualify any certificate he gave of a horse that grunted. With regard to the commercial aspect of the question, he said that a horse which grunted dropped from 30 to 50 per cent. of its value, and any professional man who warranted a grunter sound, assumed a heavy responsibility.

Principal WILLIAMS insisted that all horses should be sufficiently tested before purchase. They all knew the legal maxim *caveat emptor*, and if a purchaser took a guarantee of a horse being sound in wind and eyesight without testing him with a stick he was buying a pig in a poke.

Mr. R. RUTHERFORD said he never gave a clean certificate to a horse which grunted. He decidedly objected to say that a horse was sound if he grunted, no matter how slight. He pronounced in favour of grunting being an unsoundness, but he did not attempt to say what it was from. They might have noticed that some horses grunted on inspiration and some on expiration.

Mr. ANDERSON, Glasgow, said that undoubtedly he would never think of passing a horse as thoroughly sound if it grunted, although he had recommended customers to purchase horses which grunted, because they did not show anything wrong with their wind.

Mr. BAIRD considered a grunter was not a sound horse. A great many horses which grunted ultimately became roarers. A man would be putting himself in a false position if he gave a certificate of soundness to a horse that grunted without mentioning the fact.

Mr. MOIR thought it was well that the Society should formulate some expression of opinion on the subject.

Professor W. O. WILLIAMS moved "that in the opinion of this Society grunting alone is indicative of a tendency to unsoundness of wind, and should be guarded by special warranty.

Mr. ANDERSON, Glasgow, seconded the motion, which was adopted.

Combination among Veterinary Societies.

A letter was read from Professor Macqueen, submitting several suggestions with the view of promoting union among the members of the profession by the affiliation of local societies with the National Association. The Professor wrote that recent events touching the best interests of the profession had shown the necessity for some sort of representative union, the object of which would be, among other things, the bringing forward of the claims of practitioners to all legitimate appointments, especially in the hands of the Government.

Mr. MOIR said the object was to get prominent men from the local societies elected to represent them at the National Veterinary Association, so that important matters in connection with the profession should be taken up by the National Association. There was no doubt the idea was an excellent one.

The letter was remitted to a committee, consisting of Professor Bradley, Mr. Rutherford, and Mr. Moir.

Place of General Meeting.

Mr. MOIR pointed out that the Society had already gone to the north, the east, and the west for their summer meetings, and he suggested that they should now go to the south. He proposed that they should visit Kelso. Other places in the south were also mentioned, and ultimately it was agreed that the summer meeting should take place at Melrose.

Annual Dinner.

The members of the Society afterwards dined together. Mr. Cameron occupied the Chair, and Mr. Moir acted as croupier.

Captain APPLETON, Inniskilling Dragoons, proposed "The Royal College of Veterinary Surgeons."

Principal WILLIAMS, in reply, said he was a very old member of Council of the College, and had spent many happy days with his friends in London, but within the last few years it seemed to him that the work of the College had been to make one law to-day and to rescind it to-morrow. The great question before the profession was whether students should be admitted to the first professional examination without having passed an educational test equal to that of the medical profession at one sitting. He considered that such an enactment would be most unfair, and that so long as a student passed the educational test it was immaterial whether he did it at one sitting or at two, three, or more sittings. He maintained that the educational test was too high; a good education with a knowledge of a modern language was sufficient. It was, in fact, a question not of educating the veterinary surgeon, but of educating his clients which should be pressed. The term "degraded" had

been applied to the educational certificate of those who passed in sections. He did not say it was degraded. How long would they retain their Greek and higher mathematics after going into practice? As a matter of utility during after life, he maintained that Greek and higher mathematics would be of no use to him whatever. The man of common sense would get on, whether he had any high education or not.

Mr. ANDERSON, Glasgow, proposed "The Scottish Metropolitan Veterinary Society," and in doing so remarked that a petty readiness to take offence which seemed to prevail among veterinary surgeons accounted for the apathy which was noticeable in many of their associations. The least remark by one member seemed to give offence to certain other members.

The PRESIDENT responded to the toast.

A pleasant evening was spent by the members of the Society.

PETER MOIR, *Hon. Sec.*

YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

THE annual meeting and dinner in connection with the above association took place at the Queen's Hotel, Leeds, on January 21st, 1896; the president, Mr. J. Clarkson, Garforth, in the chair. The following members were present: Messrs. J. Clarkson, Garforth; M. Robinson, Barnsley; F. Thompson, Harrogate; J. W. Lazenby, Boston Spa; F. W. Clough, Morley; A. W. Mason, H. G. Bowes, J. Brand, W. F. Greenhalgh, G. E. Bowman, Leeds; G. Whitehead, Batley; G. Pickering, J. Cooke, Scarboro'; H. Snarry, York; P. Deighton, Selby; J. E. Scriven, Tadcaster; F. Somers, Leeds; J. S. Carter, Bradford; F. Hallilay, Dewsbury; S. Chambers, Kirkheaton; A. W. Briggs, Halifax. Mr. A. J. Lane, Leeds, and Vet.-Capt. R. W. Raymond were present as visitors. The SECRETARY read letters of apology from Professors Williams and W. O. Williams, Edinburgh; Dr. Cameron, Messrs. W. Awde, S. Wharam, Prof. Penberthy, H. Spark, Leeds; W. Hunting, London (telegram); J. C. Collings, Otley; T. Pratt, Ripon; C. T. Lang, Bridlington; J. A. Hodgman, Barnsley; T. Fletcher, Sheffield; Professor Charles Steel, A.V.D., Yorkshire College, Leeds; H. D. Chorlton, Manchester; H. Pollard, Wakefield; and Professor McFadyean, London (post-card).

On the motion of Mr. SCRIVEN, Mr. J. Abson, Sheffield, was nominated as a member.

Grunting in Horses.

The circular letter from the Lincolnshire Veterinary Medical Association on the question of grunting and its relation to soundness was read.

The PRESIDENT considered the matter one of great importance; but, so far as the profession coming to a unanimous opinion on the subject, he thought that was hardly possible.

Mr. A. W. MASON (Leeds) alluded to the differences of opinion on the subject, and said he could not go so far as to positively assert that an animal was absolutely unsound because it groaned or grunted. At the same time he thought it was their duty to mention the defect of grunting, if discovered in a veterinary examination, to their clients.

Mr. G. E. BOWMAN supported the position taken up by the Lincolnshire Association. He said his experience with young stock was that in nineteen cases out of twenty horses that grunted became roarers in the course of a few years. A horse which groaned was not sound.

Mr. PICKERING agreed with Mr. Bowman.

Mr. BRIGGS said he never remembered a horse which grunted against a wall that did not go wrong. He would not buy nor pass a horse, whether a light or heavy animal, if he grunted against a wall.

Mr. J. COOKE, speaking more particularly of the lighter breeds of horses,

observed that he should not pass a grunter as being sound. Under all circumstances the discovery of the defect should be mentioned to the buyer.

Mr. BOWMAN asked subsequent speakers to say whether they had ever known a roarer that was not a grunter.

Mr. PICKERING replied that he had known of a case where a confirmed roarer was not a grunter.

Mr. SNARRY said that grunting, as they understood the term, was unsoundness.

Mr. CARTER was also of this opinion, and added that he could not recollect a case of a roarer that did not grunt, either more or less.

The PRESIDENT said they might safely say that, as a general rule, roarers were grunters.

In reply to Mr. Briggs, the President said it appeared from the discussion that they were all more or less agreed as to the desirability of always acquainting buyers with the defect, if discovered.

Mr. SCRIVEN said he certainly should say any horse which grunted was not sound.

After some further discussion, Mr. Briggs moved, and Mr. Thompson seconded, the following resolution:—"That, in the opinion of the members of the Yorkshire Veterinary Medical Association, grunting in horses is a decided cause of unsoundness, and is a sufficient reason for the rejection of any animal so affected, when submitting to veterinary examination."

Some objection was taken to the words "a decided cause," and the mover and seconder consented to their omission. With this limitation the resoiution was ultimately adopted unanimously.

Suggested Amalgamation of Local Societies.

Mr. MASON said he had received a letter from the Secretary of the National Veterinary Association (Professor Macqueen), who asked him at the first opportunity to bring before the members the necessity for some sort of representative union, whereby prompt, energetic, and confident action could be taken to urge, among other things, the claims of practitioners to all legitimate veterinary appointments, and to support the predominant feeling concerning all matters of professional importance. The machinery for such union already existed. The only thing wanting was an understanding as to combination and movement. It had been suggested that the various local veterinary societies should be invited to join the National Veterinary Association, and, doubtless, it would not be difficult to devise a simple plan that would meet with ready acceptance or approval. To serve merely as a basis for consideration, the following suggestions were made:—I. The local veterinary societies should preserve their present independence as to meetings, discussions, and subscriptions, and agree to join and support the National Veterinary Association on questions of general professional import, whether of practice or of veterinary politics.

II. All effective members and affiliating societies should become, by virtue of affiliation, effective members of the National Association without further individual subscriptions.

III. To meet the expenses of the National Veterinary Association, each affiliated society should pay annually to the National a compound subscription, the amount (equal to a small sum per head) to be fixed in accordance with the membership strength of the local society.

IV. Each affiliated society should be represented by two or more members on the Council of the National Veterinary Association. In other words, the Council, or other responsible committee, should consist of delegates from all the affiliated societies. Thus constituted, the Council's decisions would be representative and truly national.

If the members of the Yorkshire Veterinary Medical Association agreed to entertain the substance of these suggestions, perhaps they would appoint a small committee to consider the details and report. Since receiving the letter he (Mr. Mason) had seen Mr. Macqueen, who informed him that some local societies had taken the matter up.

The PRESIDENT was of opinion that there was a good deal in the scheme which required careful consideration, although Mr. Briggs did not believe in the National or any other association dictating to them as an organisation.

Ultimately it was agreed that the Secretary be asked to write Mr. Macqueen for full details to be circulated among the members, it being understood that the matter would be brought up again at the next meeting of the Association.

One or two points arising out of the paper read at the last meeting by Mr. Pickering were next discussed, among the speakers being Mr. MASON, Mr. COOKE, Mr. ROBINSON (Barnsley), and Mr. BRIGGS.

Presidential Address.

In the course of his address the President expressed his appreciation of the compliment paid him, and said he would endeavour to uphold the dignity of the chair and maintain the usefulness of the periodical, pleasant and instructive meetings. Touching upon topics of interest to veterinarians, he remarked that the most burning question of the day, and, perhaps, the one which most nearly affected them as a profession, was the stamping out of contagious diseases, as carried on by the Animals' Department of the Board of Agriculture. Few among them would, he thought, care to defend the system at present in vogue, and, judging by the results both in swine plague and rabies, few would venture to call the work of the Board a success. The present method of arranging for an inspection of a suspected outbreak by the local veterinary officer allowed far too great a delay to occur, far greater than in the days of the old local authority. In some instances two and three days elapsed before the diseased or dead animal was seen and reported upon, and here a very great hardship to the owner must arise, because he understood if the animal died in the meantime no compensation was paid, to say nothing of the greatly increased danger of spreading the disease by this delay. What condition the viscera would be in when they arrived in London for examination he did not know, but he thought putrefactive bacteria would have had a very fair innings. It always seemed to him somewhat of an anomaly that the veterinary inspector should be allowed to decide in the case of living swine, when diagnosis was often extremely difficult, but when he had the opportunity of examining the viscera in addition, he had practically no say in the matter; he was simply a forwarding agent. With regard to the rabies order, he was of opinion that the muzzling of dogs to be of any use should be made general, and not local—a regulation muzzle adopted and the order strictly enforced for a time at least. Rabid dogs were notorious travellers, and recognised no boundaries as set out in police orders. In reference to the recent appointment of chief officer and other appointments, he thought the veterinary medical profession had been shabbily treated. Altogether the methods of procedure in the Animals' Department were as inscrutable as the face of the young lady novelist's hero, and an all-sufficient commentary on their work was the result, which was, to all intents and purposes, a failure.

He noticed that only 787 replies had been sent in to the 2,758 circulars issued respecting the important question of compulsory notification. Of the 782, 588 were in favour of adopting the Act, but some on certain conditions. Compulsory notification by veterinary surgeons would, he felt sure, be an accomplished fact in the course of time, and it was for them to see that they were neither neglected nor imposed upon in a matter which was so important to them.

In the circular in question nothing was said concerning what diseases it was intended to include, but he presumed the present ones affected by the Contagious Diseases (Animals) Act were the ones intended, with any other that it might be thought necessary to add from time to time. They must endeavour to see, when the time came, that the enforcement of the Act was general, and not left to the option of the local authority, because partial enforcement would only open the way to endless difficulties. At present they had no suitable officer to whom to notify, and most of them would object to being compelled to do so to the local policeman.

This brought him to a subject which, though he conceived it his duty to discuss, he approached with the greatest reluctance. He had first spoken of the desirability of pulling together, and he was now reminded of their motto, "*Vis unita fortior.*" Did they live up to it? Did they help each other as they should? Or was competition becoming so keen that they were treading on and climbing over each other to achieve success? One was almost inclined to think the latter when one saw veterinarians (and men high in the profession) appearing against brother veterinarians in cruelty cases. He need hardly say that he was more particularly alluding to the recent case in Leeds, in which two veterinary surgeons were summoned for cruelty to a horse while under their care for treatment, but which happily broke down without the defence being called. He would make a distinction between the resident veterinary officer of the R.S.P.C.A., who had seen the case and was subpœnaed, and gave evidence according to the best of his belief; and the expert who travelled by the night mail from Yokohama, Jerusalem, or Japan, knowing practically nothing of the merits of the case, except for the prosecuting society, until he heard the evidence in court. Almost the only thing he knew when he started from home was that he was expected to give expert evidence against his fellow-practitioner. He had no wish to claim immunity from prosecution for their profession, but at any rate do not let them help the opposing forces; let them all try to defend their little citadel. Individually they might not be able to help each other much, but at least they could all refrain from harming one another. The regulation of the prosecutions for cruelty to animals should be in the hands of the Government, and not in the hands of a voluntary society which had to depend for its success on the number of subscriptions it could catch from the public, the bait naturally being its success as a prosecuting society. With the objects of the R.S.P.C.A. he had every sympathy—not one present abhorred cruelty more than he did—but with its methods he had very little sympathy. Interference by the society with a veterinary surgeon in the legitimate practice of his profession he regarded as unwarrantable. The veterinary surgeon of all men was the one to know where necessary suffering ended, and unnecessary suffering began. He contended that the veterinary surgeon in attendance, and who had watched the case from day to day, or hour to hour was the man to suggest and direct the treatment, and not the R.S.P.C.A., in whose councils he was afraid the veterinary adviser often only played a very minor part, and whose energies were largely directed by its uninformed officials—men whose reputation as energetic servants, nay, whose very existence as officers of the Society depended on the number of convictions they were able to obtain, and whose existence was often only equalled by their absolute certainty in the infallibility of their own opinion. To return to the recent Leeds case. There was a brighter side to the question, for it was very pleasing to see that there was no lack of professional witnesses ready to appear for the defence had they been necessary.

He was glad to note among the various veterinary societies an increased desire for wider views by the more frequent interchange of letters on interesting subjects for discussion. This was a step in the right direction, and should lead to very great good.

During the past year the world of science had had many gains and many losses. Of the latter the chiefest was the decease of M. Pasteur, the greatest scientist of this century, or, perhaps, of all time. Their losses as a profession had been many and heavy, and their own association had lost two of its oldest members and greatest ornaments—men who were regular in their attendance —earnest in their endeavours for the good of the profession. Their places would be very difficult to fill.

Immense strides were being made in diagnostic methods and new remedies. The two diagnostic tests, tuberculin and mallein, had now been before them long enough to enable them to form an opinion as to their value, and though doubt had been cast on tuberculin in Denmark, it might fairly claim to be a success in this country. Of the many new serum remedies it was yet too soon to judge properly of their permanent value. They seem, undoubtedly, to possess value, and as it was a new branch of medical science further developments might be expected, as very great benefits accrue therefrom. But the most startling discovery was that of Professor Röntgen, and as his assertions appeared to be borne out in England they might be taken to be correct. This new photography was in its infancy, and who could predict what the result might be? In human practice it was already being employed in very many diseases, and for many purposes. If what was claimed for it were true, he saw no reason that it should not be used in veterinary practice, say, for instance, to determine in the existence of spavin, or how far a splint extended below the ligaments or tendons. It might also be useful in those doubtful cases of injury to the back, and in hip disease, and many other cases.

They must all feel gratified that the Council were taking vigorous steps to prevent the quack assuming to himself the title of veterinary surgeon. Convictions were becoming very common; almost every day occurrences now. The penalty was as yet only small, but as time went on, and the offenders were better warned, no doubt it would be increased. This protection of its members was a duty which the College owed not only to itself, but also to the public, because very few of them were in a position to ascertain whether they were employing a qualified man or not, and in this personation discredit was often brought on veterinary surgeons as a body. Quackery could, of course, never be stopped. Any man had a right to experiment with drugs on his neighbour's horse, provided his neighbour allowed him, but he must not practice deceit as to his identity. Following closely was the question of medicines, with which the market was flooded. This, too, was trespassing on the ground which the veterinary surgeon rightfully looked on as his own, and he must admit he knew of no remedy for the abuse, except in the case of M.R.C.V.S., many of whom, he was sorry to say, had remedies which they advertised on their own account, and others covered firms who manufactured them. This should be, and no doubt some day would be, prevented by the Council, who were able to control its own members, if not outsiders. If the remedies were always harmless he would not grumble so much, but in some cases they were far from it, and many cases one was called to had received a glorious mixture of this firm's "stomach smoother" and that firm's "liver brightener" on the top of someone else's "prescription for waking the dead." It was by no means easy to diagnose which symptom belonged to the disease and which to the so-called remedy. It would be far better if their clients, instead of buying a lot of this sort of thing, would either give a simple remedy of their own, the compound parts of which they knew, or procure a reliable one from their own veterinary surgeon, who would be called in if the case did not progress favourably, because he would then know exactly what medicine the animal had received, and he could treat it accordingly. He (the President) might be somewhat biassed in his views, but his experience was

that the client who called in his veterinary surgeon in good time was the greatest saver; he had a lesser account at the end of the half-year, and was subject to far fewer losses among his stock. If disease got a firm hold it meant a longer attendance and often only a very poor ending.

He had great faith in the future of their profession, because the more the public became enlightened the more they would see it was to their advantage to employ them. He did not take at all a pessimistic view of the future. Even the invention of an autocar, and the passing of a bill to allow it to run on the road, did not shake his optimism. The same danger was supposed to threaten when steam came into use, and yet the horse tribe was by no means extinct. Bearing on this subject they should all see a very smart little parody which appeared in a recent number of the *Record*. In conclusion, the President said that at the close of the year he should like to leave the Society none the worse, but just a little better than he found it, financially, scientifically, and socially. Those meetings were more than meetings pure and simple for the discussion of interesting subjects; they met there and gripped each other by the hand; little differences could be explained, life-long friendships formed and strengthened, and the profession as a body advanced. The interest must be maintained, and he looked to the members to do it for him by taking papers and interesting cases for discussion. He had an idea that the short cases by their variety often created most interest, and if it met with their approval and was quite legal, they might at one of the current year's meetings arrange for a full array—say a dozen or more—from the various members of the Society, in lieu of a long paper. Much might often be learnt by the wisest from a case from another's note book.

Mr. BRIGGS moved a hearty vote of thanks to the President, remarking that he had never heard a clearer and more lucid address than the one to which they had just listened.

Mr. MASON, in seconding, congratulated the President upon the excellence of his address.

The resolution was carried amid acclamation and suitably acknowleged.

The Walley Memorial Fund.

The PRESIDENT then brought before the meeting the question of raising a fund to perpetuate the memory of the late Professor Walley.

The Annual Dinner.

Between thirty and forty gentlemen attended; among those who sent letters of regret at inability to be present was Professor Williams. Mr. Cooke, of Scarboro' (the president for the past year) filled the chair, and the vice-chair was occupied by the new president (Mr. Clarkson).

The CHAIRMAN proposed the customary loyal toasts and in doing so made a sympathetic allusion to the death of the late Prince Henry of Battenberg.

The military toast was also submitted by the CHAIRMAN, and responded to by Captain R. W. RAYMOND, A.V.D. (of the 8th Hussars, at present stationed in Leeds) and Mr. MASON, who was formerly connected with the Army Veterinary Department, and now an officer in the Leeds Artillery Volunteers.

Mr. BRIGGS gave "The Royal College of Veterinary Surgeons," coupling therewith the name of Mr. Mason, who, he observed, had for some years represented them on the Council in a manner that merited their very warmest thanks. He had represented their views to their satisfaction. The Royal College, from its elective character, must be a body in which the veterinary medical profession as a whole had perfect trust.

Mr. MASON, in response, took the opportunity of thanking them for assisting

in placing him fifth on the poll at the last election of representatives of the Council of the Royal College. In a *resumé* of the work of the past 12 months, he said there had been no particular important matter, except the question of the Animals Department of the Board of Agriculture. A committee has been appointed to approach the President of the Board of Trade (Mr. Walter Long) as to whether he would receive a small deputation to lay the grievances of veterinary surgeons before him. He noticed that Mr. Long, through his chief secretary, had replied that he would not receive such a deputation, but that he would only receive the President and the Secretary of the Royal College of Veterinary Surgeons to talk the matter over. He (Mr. Mason) was not now a member of the Registration Committee, but he knew that the members of that body were doing their utmost to protect the profession from unscrupulous persons practising their arts—more particularly in the country districts.

"The Examiners" was given by Mr. J. CARTER (Bradford), and acknowledged by Mr. ROBINSON (Barnsley), who said it was of the greatest importance that they should have good men as examiners.

Mr. CLARKSON next submitted the toast of "The Veterinary Schools." He said he was afraid the schools, just now, were not in a very good position, for times had been exceedingly hard lately. The new rules had, it would appear, affected them somewhat seriously. Some members of the Council seemed to think that the schools should not be considered. He, however, thought they had a *locus standi*, and should be considered in the transactions of the Council. The schools represented the life-work and the intellect of a large number of the profession, and a great deal of capital. In France, the Government recognised the Veterinary medical profession as being a great help to the stock owners of the country. That was a matter which, among other questions, the Government of this country ought to consider in regard to the teaching of veterinary science. If the Government would only help them more than at present, they in return would be able to help the farmer more.

Mr. BRIGGS, in reply, joined with Mr. Mason, Mr. Clarkson, and other speakers in regretting the absence of Professor Williams, and contrasted the teaching and the school fees of the present day with what existed when he and others present were undergoing their scholastic training. They had, he said, made it that a man who wished to enter their profession must have received almost a university education. The matriculation examination now prescribed for entrance to their schools was very strict, and, indeed, any man who was able to pass that test was fit either for the medical, or legal, or even clerical profession.

Mr. G. E. BOWMAN then proposed "The Other Veterinary Medical Societies," which he regretted to say were unrepresented on this occasion. These societies were, he added, of great value to the profession.

Mr. FRANK SOMERS submitted "The Visitors," welcoming once more at their annual gathering Mr. H. A. Child, solicitor, of Leeds, and Mr. Lane.

Mr. CHILD responded in a speech largely reminiscent of his professional experiences in defending prosecutions instituted by the Royal Society for the Prevention of Cruelty to Animals. He said that, like members of the veterinary medical profession, he did not carp at, or take exception to, any society that had for its object the advantage of the public, and the prevention of cruelty to animals, but he was entitled to criticise the means which were sometimes adopted by voluntary agencies. He agreed with what had fallen from more than one judge of the land, that whenever a person in authority embarked upon an inquiry, his object should be to conduct it impartially and properly. It should be the duty of an officer, whether a policeman or the agent of a voluntary society, to obtain all the information he could get, both in regard to the accused and the accuser, and leave it to the judgment of the tribunal before whom he appeared.

Mr. LANE also responded.

Mr. GREENHALGH (Leeds) gave "The Chairman," observing that during the past year Mr. Cooke had filled the chair with great credit both to himself and the Association, while the various meetings and discussions had been very advantageous to the members.

Mr. MASON supported the proposition, also testifying to the ability displayed by the Chairman, and recalling the fact that during the year Mr. Cooke had generously invited the members of the Association to Scarborough, where he resided.

The toast was drunk with musical honours.

The CHAIRMAN briefly acknowledged the compliment, saying how heartily he thanked them for their support during the year and their kindness on this occasion. If what he had done while holding the presidency had been satisfactory to them he was highly pleased. At any time he should be happy to do anything that he could for the Association and the profession generally.

The proceedings then terminated.

ONTARIO VETERINARY ASSOCIATION.

THIS Association, which is composed of duly qualified veterinary surgeons practising in Canada and the United States, held its annual meeting in the Veterinary College, Toronto, on Dec. 21st.

Mr. G. L. Robson, V.S., the President, opened the meeting with a most excellent address, containing many points of interest and much food for thought.

After the usual routine business, the reading of the minutes of the last meeting, secretary and registrar's reports, communications, etc., a discussion ensued, relating to the Act recently passed in the Provincial Legislature respecting veterinary surgeons, and a fine having been imposed under that Act upon a person for falsely claiming the title, which fine should have been paid over to the funds of this Association.

Prof. S. Sisson, of the Ontario Veterinary College, read an excellent paper on "Undescended Testicle in the Horse."

Mr. A. Crowforth, V.S., read a very interesting paper on "Toxin and Antitoxin," in relation to the cause, cure, prevention and diagnosis of disease.

The following are the officers for the ensuing year: Professor A. Smith, F.R.C.V.S., Honorary President: Mr. H. Hopkins, V.S., President; Major Lloyd, 1st Vice-President; Mr. S. Sisson, V.S., 2nd Vice-President; Mr. Sweetapple, V.S., Secretary; Mr. W. Cowan, V.S., Treasurer.

STATE BOARD OF VETERINARY MEDICAL EXAMINERS.

THE State Board of Veterinary Medical Examiners, of Pennsylvania, was convened at Harrisburg at 12 m., on November 13, in accordance with a call issued by the Secretary of the Commonwealth. The Board, being duly sworn into office by the Department of State, Dr. W. Horace Hoskins was made temporary chairman, and Dr. S. J. J. Harger secretary *pro tem.* All the members of the Board were present.

The first order of business being election of permanent officers, Dr. S. J. J. Harger was nominated for President by Dr. Harry Walters, and Dr. W. Horace Hoskins for Secretary by Dr. J. C. McNeil. No other names being placed, the election was made by acclamation, upon which the officers assumed their respective places.

The question of adopting suitable bye-laws for the government of the Board was taken up for consideration, and after considerable discussion on the subject, a motion was made that the chair appoint a committee of three to prepare suitable rules to be submitted to the entire Board for adoption at

the next meeting, and that they also draft a suitable form of license to be presented at the same time.

The Secretary was instructed on motion to procure a minute book and a suitable registration book.

Deputy-Secretary Burnett was then asked to inform the Board as to the intent of the act so far as placing on the seal of the State, and the Board was informed that all licenses would have to be returned to the Department of State at Harrisburg to receive there the seal of the Commonwealth.

It was also suggested to the Committee on Rules and Bye-Laws that the officers be elected annually. It was also decided that two regular meetings be held each year in the latter part of April and June, with such other meetings as the business of the Board might demand.

The subjects for examination were assigned as follows: Anatomy, Veterinary Diagnosis and Zootechnics, Dr. S. J. J. Harger; Practice of Medicine, Dr. W. Horace Hoskins; Obstetrics, Meat and Milk Inspection and Sanitary Medicine, Dr. J. W. Sallade; Surgery and Physiology, Dr. Harry Walters; Pathology, Chemistry, Materia Medica and Therapeutics, Dr. J. C. McNeil. The age of the applicants, their normal character and genuineness of their diplomas, were placed in the hands of the Secretary.

It was also decided that a list of fifteen questions on each branch would be submitted to the applicants, from which they should select ten for answering. Applicants shall draw one from a box of cards with numbers upon them, upon which he shall write his name and place the same in a sealed envelope, and shall designate his answers to the questions on the various subjects by the same number. This card shall be placed in the keeping of the Secretary. It was decided that a general average of 65 per cent. shall have been attained, and that a minimum of 50 per cent. must be attained on each branch.

It was moved and seconded that the April meeting shall convene for two days. It was decided that the first regular meeting of the Board for examination of applicants for license shall convene on the third Monday in December at the office of the Secretary, 3452 Ludlow Street, Philadelphia, Pa., and that notices of the same be sent to the veterinary journals of North America.

The Chairman then appointed the following Committee on Rules and Bye-Laws: Dr. W. Horace Hoskins, Chairman; Dr. J. W. Sallade and Dr. Harry Walters, after which a motion to adjourn prevailed.

W. Horace Hoskins, *Secretary.*

CONTAGIOUS DISEASES ANIMALS ACT, 1894.

Summary of Returns, for the four weeks ending February 15th, 1896.

England and Wales.

Pleuro-Pneumonia.	Swine Fever.	Anthrax.	Glanders including Farcy.	Rabies.	Foot-and-Mouth Disease.
None	*Slaughtered.* As diseased, or having been exposed to infection 5224	Animals attacked 50	Outbreaks 60 Horses affected 102	Dogs reported 57 Other animals ... 1 Destroyed, as having been exposed to infection 23	None

London, 44 outbreaks of glanders; 72 cases.

SCOTLAND.

Pleuro-Pneumonia.	Swine Fever.	Anthrax.	Glanders, including Farcy.	Rabies.	Foot and-Mouth Disease.
None	*Slaughtered.* As diseased, or having been exposed to infection 953	Animals attacked 25	Outbreak 1 Horses affected 11	No cases reported	None.

IRELAND.

None	*Slaughtered.* As diseased, or having been exposed to infection 238	No cases reported	Outbreak 1 Animals affected 1	Dogs reported 51 Other animals ... 13 Dogs, destroyed as having been exposed to infection 79	None

Parliamentary Intelligence.

DISEASES OF ANIMALS BILL.

Mr. LONG asked leave to bring in a bill to amend the Diseases of Animals Act, 1894. He said that the bill consisted only of two clauses, one of which gave the power sought, and the other consisted of the title. Although the bill proposed to amend the law, it did not propose to make any change in the state of things as existing at present. Under the Diseases of Animals Act power was given to the Board of Agriculture to protect the country against the danger of disease by the issue of certain regulations so long as the Board had reason to believe that there was just cause to fear infection. The proposal which he now made to the House was to remove altogether that discretion from the Board, and to make the restrictions upon the import of cattle from other countries permanent, and therefore to put an end altogether to the power of any Minister to abolish the regulations, and admit the cattle. An overwhelming majority of the agriculturists in this country had declared times out of number that, owing to a want of confidence on their part, they had been unable to develop the production of cattle. They asserted that owing to the fact that it was within the power of the Minister of the day to remove the restrictions they were unwilling to embark their capital and skill in an industry which required time for the realisation of profits, and which might at any moment be destroyed if, by the removal of the restrictions, disease was suddenly again to spread throughout the land. The evidence of this feeling was to be found in the fact that a very large deputation had waited on his predecessor in office and urged the need of permanent restrictions. His predecessor had found himself unable to comply, but he adhered fearlessly to the course of restriction which had before that been adopted. He (Mr. Long) recently received a similar deputation, representing 63 societies, including the Central Chamber of Agriculture, the Royal

Agricultural Society, the Smithfield Club, the Farmers' Club, the Highland and Agricultural Society, the National Agricultural Union, the Shorthorn Society, the West of England Agricultural Society, the National Sheep Breeders' Association, and the National Pig Breeders' Association. That influential deputation urged that the responsibility of making and maintaining restrictions should not be thrown on a Government Department, but that the Legislature should, once for all, lay down the principle that all cattle should, except under very special conditions, be slaughtered either before shipment or at the port of debarkation. It was to give effect to that view that he was asking the House to assent to the introduction of this bill. Regarding pleuro-pneumonia, it was most difficult of detection, and it might long lie latent, and the same difficulty of detection existed with the disease of sheep scab. At a time when everything was looking most satisfactory, a sudden arrival in this country of cattle affected with disease might bring in its train not only fearful inconvenience, but almost ruin for many of the stockowners and breeders. In face of this possibility it was not reasonable to expect that men should spend their capital and skill on the development of cattle-breeding. It had been contended in some quarters that this was a protective measure in the sense that it was an attempt to protect cattle owners from unfair competition. If by saying "hear, hear," hon. gentlemen meant to give their assent to that proposition, he suggested that they had not made a sufficient examination of the subject. If they meant that by some legislative measure an additional or artificial value would be given to the home product by the exclusion of the product from other countries, they were entirely wrong, because whatever the effect of measures like this might be, it certainly had not the effect of raising prices. If they would examine the facts with regard to the effect upon the prices of meat by these restrictions, they would find that whether it was caused by the introduction of foreign dead meat, or whatever the reason might be, certainly the price of live beasts or dead meat had not gone up since the restrictions had been imposed. The disease with which they had most to contend was pneumonia, and the House would appreciate that at this moment we were immeasurably better than we were in 1890, owing to the maintenance of these strict regulations. In that year the disease existed in twenty counties, and the number of affected districts was 119, while 521 cattle were destroyed, whereas in 1895 the disease existed in only one county; there was only one outbreak, which was treated by the owner himself. That showed that the imposition of the restrictions had been of enormous benefit to this country and its cattle owners. He had been told that this was an argument for continuing the present state of things. In whose interests was it that the present state of things should be maintained? Was it in the interests of the graziers in this country, or in those of the ports who received the cattle, or in those of the people who exported them? So far as other countries were concerned, whether it were the United States or our Colonies, this country had no desire whatever for legislation to interfere with their trade with us. The bill proposed to make the restrictions which had been in force permanent. The right hon. gentleman then quoted figures to show that whereas in 1880, 154,800 cattle were imported from the United States, in 1895 the number was 273,000, showing that the restrictions, while they secured the breeder and grower at home from disease, did not interfere with the importation of beasts for slaughter or in the trade in dead meat. He was quite confident there was no agricultural industry which was capable of such development as this provision of store stock. It would be urged by the hon. member for Aberdeenshire that this measure would act with harshness upon a part of Scotland. That was one of the difficulties in connection with the administration of agricultural affairs. The industry was so different in its character in different parts of the country, that it was impossible to hope that any measure which

he might propose would apply with equal satisfaction to agriculturists in all quarters. He thought he was justified in appealing to the hon. gentleman who represented that part of Scotland—after all it was only part of Scotland. He also appealed to hon. gentlemen representing the eastern portions of England. They were after all in a very small minority. The vast majority of the people in this country were interested in the protection of flocks and herds from disease or any risk of disease. He could not conceive the moment arriving when the Minister responsible for agriculture would be able to remove those restrictions under any condition of things which he could conceive was ever likely to exist in this country. The risk of the agriculturists was so great, and the advantage to be obtained in comparison so small, that he was confident that if the Minister were to strain his responsibility in any direction, it would be in the direction of protecting the flocks and herds of the country. He believed that the United Kingdom could well supply the requirements of the graziers of this country if it had the opportunity. And in regard to the question of stores, they were applying themselves to that at the present moment. The demand for the safeguards which the bill gave was made by the majority of farmers in all parts of the United Kingdom. The Government believed that the demand was no greater than the circumstances of the case justified. He did not pretend that the bill, if it was passed, would restore agricultural prosperity, but he respectfully and sincerely assured the House that this was one of the ways in which they could do something for the agricultural interests of the United Kingdom.

Dr. FARQUHARSON said he did not oppose the introduction of the Bill, but he would point out that, with the great increase in the cattle-breeding industry, there was great difficulty of obtaining sufficient stores to meet the necessary wants. A very satisfactory supply was obtained from Ireland, but it fell short of the supply which was undoubtedly required. He did not think the right hon. gentleman had made out his case for the other sweeping proposal of the present Bill. At least he did not think, in view of the very small amount of disease which now existed in this country, that there was any demand at present for the measure. The right hon. gentleman, with the powers at his disposal, was, like his predecessors in office, doing very well, and was quite able to give to the farmer all the protection he required without any of the unpleasant savour of protection which these new proposals suggested.

Mr. LLEWELLYN said that the hon. member who had just spoken represented a constituency many of whose members made a very good living by the fattening of cattle, and there were also breeders in the east of England who shared their opinions. But there was a far more important branch of the agricultural industry—viz., the dairy-produce branch, and no one who had seen the harm which had been wrought by the introduction of disease into the dairy-farming stocks could deny the necessity for some measure for effectually dealing with the matter. It would pay the dairy-farmers much better to destroy the entire herd when foot-and-mouth disease broke out than to keep them through this terrible scourge, for it meant not only loss of milk, but the ruin of every kind of cattle in the yard. A recurrence of what took place in 1872 and 1875 and the dairy-farmers in the west of England would be absolutely ruined, and it was because the Bill would go far to prevent any outbreak of the disease that he heartily supported it.

Dr. TANNER hoped that the House would take care to prevent anything being introduced into the bill in the nature of protection, which, however valuable it might be for the rich, was absolutely against the interests of the poor.

Colonel LOCKWOOD thought that if every measure in the interests of the agriculturist was to be put on one side because of the fear of protection being introduced, the farmer would find himself in a difficult plight. The bill was

merely an act of justice, and such a one as he should have expected from the right hon. gentleman, the Minister for Agriculture.

Mr. JEFFREYS thought the bill would do a great good to agriculturists.

Lieut. General LAURIE said the feeling in Canada was that the British Government had not treated them well, because they maintained that they never had had cattle disease in Canada. They also maintained that the prohibiting of the importation of live Canadian cattle was a policy of protection to the British farmer. The Government were doing a good turn to the people of Canada by teaching them that they must fatten their cattle.

Leave was then given to bring in the bill, and it was read a first time. The second reading was put down for Monday.

A CASE OF TETANUS CURED WITH ANTITOXIN.

BY GEO. JOBSON, V.S., OIL CITY, PA.

THE curative treatment by means of antitoxin, although as yet confined to a limited number of diseases, opens a field whose limits we cannot yet define, and many diseases which are now looked upon as fatal, may in the near future be cured by this form of treatment. The discovery of tetanus antitoxin is one of the most recent and valuable additions to the list, and it is the only known remedy at present that can be relied upon to cure this generally fatal disease.

That tetanus occurs spontaneously has very few supporters at present, as it is necessary to have the presence of the toxin or poison before the disease is produced, and the germs which produce it may gain entrance to the system by the slightest kind of a wound.

The case about to be described is not cited simply because the animal recovered, as I have had several cases recover by medicinal treatment alone; but because the effects of the material were almost immediate, while by the old methods it required months sometimes to produce the same results.

Case.—A chestnut pony gelding, used in a grocery wagon, received a wound in the neck from a rusty nail sticking out of a board in the stall. In about nine days afterwards the man in charge noticed a slight stiffness during locomotion, but it was not thought serious, and the animal was kept at work until the next day, when he was brought to the office, and a diagnosis of incipient tetanus was made, and it was advised to have the animal unhitched and removed to his stall.

Nerve sedatives and anti-spasmodics were given, but the animal grew steadily worse, and on November 3rd, it was a well-marked cases of tetanus. The muscles of the trunk and limbs were now stiff, but trismus had not as yet occurred, and with assistance the animal was able to rise when down.

Having read an article by Paul Gibier, M.D., Director of the New York Pasteur Institute, on the treatment of this disease in man by the use of antitoxin, and to whom I am indebted for some of the above statements, I suggested to the owner that we send to the institute for a sufficient quantity of antitoxin to give it a fair trial, if it did not cost too much, and he consented. Before the arrival of the antitoxin, on the morning of November 7th, the horse was found lying in the stall unable to rise. Slings were put under him and on being raised to his feet was unable to stand. The entire muscular system was stiff and the jaws locked. Respiration was rapid and conducted with much difficulty. The slightest disturbance would bring on spasms, and it looked doubtful if the horse would live any length of time.

On November 9th a supply of antitoxin sufficient for three injections was received from the institute, and at 4.15 p.m., assisted by my father, the first injection was made. The hair being first shaved from portions of the neck, the parts were washed with a solution of carbolic acid, and the antitoxin in

solution was injected hypodermically. Immediately before the injection the pulse was 44, temperature 100¾° F., and respiration 72. The wound was washed with iodide, 1 ; potassium iodide, 2 ; and water, 100 parts. When the second injection was given next morning, the respirations had dropped to 55, pulse 40, and the temperature had risen to 101¾° F. Improvement in the condition of the muscles of the body and limbs were general, while the muscles of the jaws were decidedly improved. The neck being moved from side to side, instead of being held in a straight line, as previously.

On November 11th the third injection was made, and a further improvement was visible ; the respirations being 52, pulse 40, and temperature 100$_2$° The muscles of the jaws could be freely used in masticating. Improvement continued steadily until six days after, when he was taken out of the slings and walked around the yard. Recovery is now complete and the horse is doing his regular work.

STRANGE DEATH IN NEWCASTLE.

MR. THEODORE HOYLE and a jury, sitting at the Newcastle Infirmary on Feb. 20th, inquired into the case of George Gibson Johnson, aged 36, who died there on Tuesday morning.

Mrs. Ellen Johnson said her husband had been engaged as a cartman with Mr. Thompson, farmer, of Winchester, near Wylam. He was always temperate in his habits, and had enjoyed good health up to about a year ago. Then he had influenza, and was at home a week, and returned to his work. While he was in the house ill he told her that he had been bitten by the horse he drove, but he did not take any notice of it. He showed her a scar on his arm where he said the animal had bit him, and, when this was squeezed, matter came from it. Deceased only worked for another week, and then came home again, complaining of a bad throat. He returned on the Saturday, and on Monday Dr. Slater was called in. In a few days her husband broke out in a rash on his face, and it soon extended all over his body. A lot of doctors were brought to examine him, and one—she did not know who—said the disease looked rather like glanders. After that Dr. Armstrong, the medical officer of health, got Mr. Stevenson, veterinary surgeon, to examine the horse. He certified that the animal was suffering from glanders, and it was destroyed. Witness added that the owner (Mr. Thompson) also had the horse examined by Mr. Gillespie, another veterinary surgeon, and he said there was nothing the matter with it. After three weeks her husband was removed to the Walker Hospital, where he staid 13 weeks, and came out a good deal better. He was at home for a week again, and then his throat once more got worse, and Dr. Slater advised him to go to the country. Accordingly he went to stay with some friends at Wooler in July, and remained till about the beginning of last December, when he returned, at that time so weak that he could neither walk nor feed himself. He stayed at home from Tuesday till Saturday, and was then ordered to the Infirmary. Witness knew the horse. It seemed to have a cold, but she did not notice anything particular. Her husband said it had been running at the nose. Diseased suffered very much with his throat, and he had a discharge from there.

Dr. Davidson, jun., house physician, said deceased was admitted on Dec. 7th, and was then emaciated and in a bad condition generally. He described the symptoms, and said that deceased went on all right for a time, and then tumours formed in his mouth and he had bronchitis, which became affected by the violent discharge from the mouth, and he got inflammation of the lungs, from which he died. At the post-mortem examination, held in conjunction with two other doctors, they found no certain signs of glanders. They could not decide positively, however, until a microscopical examination had been

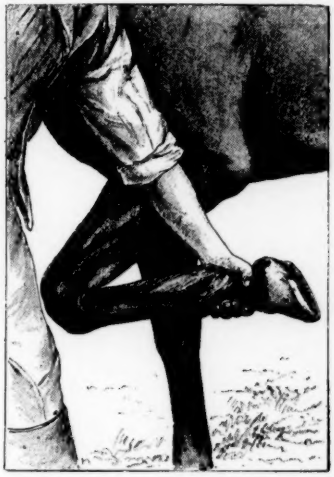
made, and they had sent specimens of the matter to be prepared for that purpose. The ulceration in the throat which ultimately caused the inflammation of the lungs might have been caused by glanders or something else; but at present he was unable to give a definite opinion.

The jury returned a verdict to the effect that death was due to inflammation of the lungs, but what gave rise to it there was no evidence to show.

Reviews.

ILLUSTRATED HORSE BREAKING. By CAPTAIN M. HORACE HAYES, F.R.C.V.S. (W. Thacker & Co., London and Calcutta.)

The accomplished author, in this the second edition of the work, has so much enlarged and re-written it, as to render the work almost a new one. As an exposition on the art of Horse Breaking, it is far and away the best that has ever been published. Although it is not given to every horseman to have the nerve and physique (so amply possessed by the author), requisite to handle unbroken horses, he shows that by adapting his clever manual methods



of breaking horses to their psychological limitations and peculiarities much and ready success can be obtained. Indeed, by means of the intensity, as he terms it, of his methods he claims to be able, no matter how wild and "green" a horse may be, to "mouth" and make him a good saddle-horse in three weeks' time.

The work is divided into 13 chapters, the first two, comprising 63 pages, dealing with the mental qualities of the horse and the theory of horse-control. These topics are well thought out, tersely and clearly expressed, and are moreover extremely interesting, were it only from a scientific point of view. The other chapters give practical details of his system of horse breaking, and are beautifully illustrated by photographs and woodcuts. The

concluding chapters relate to the training of horses for all purposes, after they have been broken.

The parts in the book which ought to specially interest veterinary readers are chapters I. and II., which treat on equine psychology, and chapter IV., which deals with horse control. As instances of the care in representation and attention to detail displayed, we give Figs. 1 and 2 to illustrate the wrong and right way of holding a horse's foot up. In Fig. 3 the veterinarian will see that in the canter and gallop, the weight of the horse and rider is borne during a period of each stride by the leading fore-leg, which is consequently more liable to suffer from sprain and concussion than its fellow.

The work throughout teems with original information and ideas, and others derived from the best sources, regarding the handling of horses, broken and unbroken, which are valuable to horsemen, however experienced. It possesses a distinct educational value for students and others interested in the equine species, as the former in their eager pursuit of scientific knowledge are apt to underrate or neglect the importance of the practical. The book is got up in excellent style. The knowledge of his subject displayed by the author is varied and profound, and the literary merit of the book is to be commended. Altogether, it is one well worthy of a place in the library of every owner of horses.

We have read with much interest Mr. E. D. Miller's book on "Modern Polo." (W. Thacker & Co.) It is well written and the advice and instruction thoroughly sound, as one would expect, coming from the pen of such a master of the game. Great credit is also due to his editor, Captain Hayes, who has the book beautifully illustrated and added to, by a useful chapter on "Veterinary Advice to Polo Players." It is wonderful what a hold polo has taken in this country; not only every cavalry regiment, but many large towns boast of a polo club, and the old-fashioned prejudice about the cruelty of the game is

now seldom heard, and reasonably so, for every unprejudiced onlooker must observe what excitement and pleasure an old polo-pony gets from the game, and a beginner on such an one finds himself perfectly astonished how continually he is in the thick of the game without any assistance on his part; in fact, he is generally abused for being too much there. Mr. Miller not only gives excellent advice to beginners but places the game before us on a thoroughly scientific and practical basis. His advice on the selection of a pony is very sound, and we thoroughly agree with him where he recommends every intending purchaser to ride the pony himself before deciding; for five minutes on its back will teach him more than walking round it for half an hour. As regards soundness, of course, a young pony should never be purchased for polo with a screw loose; but it is perfectly marvellous how an old one, apparently quite broken down, comes out year after year and plays through the season with hardly a day off. Still we do not think the advice to get a veterinary certificate and then judge for yourself is quite correct; far better, if you want a professional opinion, to have the pony examined in your presence and discuss the pros and cons then and there with your veterinary surgeon

and abide by his decision. He can and will tell you much more than he can write on a certificate and it is to your mutual advantage. Mr. Miller gives good advice on shoeing, bitting and saddles, amongst many other things; and as regards the latter we are quite of his opinion that a 12lb. saddle is small enough for the average player. There is a strong tendency, especially among cavalry men, to use the lightest saddle possible, with the natural result of a maximum of discomfort both to the pony and player, not to mention many a sore back. His advice on wintering ponies is certainly sound, also the manner of bringing them into work again, and there are two excellent chapers on the "various breeds of polo ponies" and "polo pony breeding," the former being beautifully illustrated (particularly two English ponies, 25 and 46, and an Arab, 51 and a Syrian Arab, 53). Mr. Miller writes on Indian polo with the same knowledge and freedom as of the home game, having had considerable experience of it in that country, and he, like many other authorities in India, swears by the Arab. Polo players will find this book full of most valuable information (including, of course, the rules of the game up to date), and a careful study of it will well repay even old experienced hands.—A.

Army Veterinary Department.

THE Queen has been graciously pleased to give orders for the following appointment to the Distinguished Service Order, in recognition of the services of the following officers during the operations of the Chitral Relief Force :—

To be Companion of the Distinguished Service Order—Vet.-Lieut.-Col. G. A. Oliphant, F.R.C.V.S., is placed on Retired Pay, dated 26th January, 1896.

The undermentioned Veterinary-Majors to be Veterinary Lieut.-Colonels:—

J. Kettle, vice W. A. Russell, F.R.C.V.S., retired, dated 6th January, 1896;

J. C. Berne, vice G. A. Oliphant, F.R.C.V.S., dated 26th January, 1896.—*The London Gazette.*

Appointments and Movements.

Veterinary-Lieut.-Colonel J. Kettle has been appointed District Veterinary Officer, Woolwich.

Veterinary-Lieut.-Colonel J. C. Berne has been appointed to the War Office for duty in the office of the Director General, Army Veterinary Department.

Veterinary-Lieutenant T. W. Rudd has been transferred from Aldershot to Athlone.

Veterinary-Lieutenant J. D. E. Holmes from Aldershot to Woolwich.

Extract from *London Gazette*, dated 11th February, 1896 :—

Veterinary-Captain George F. Davis to be Veterinary-Major. Dated 9th February, 1896.

Arrivals.—Veterinary-Lieutenant A. C. Newsom, having arrived from India on 1st inst., is posted to Woolwich for duty.

At the Levee held on the 13th February, at Dublin Castle, by Earl Cadogan, Lord Lieutenant of Ireland, the following officers of the Army Veterinary Department attended :—

Veterinary-Lieut.-Colonel C. Clayton, presented by Field-Marshal the Right Hon. F. S. Roberts, V.C., G.C.B.;

Veterinary-Majors—J. Reilly, and J. Matthews, F.R.C.V.S., F.R.G.S.;

Veterinary-Captains—C. E. Nuthall, J. A. Meredith, F.R.C.V.S., and A. J. Haslam, M.D., F.R.C.V.S.

"RELIANCE" CASTRATOR.

(PATENTED).

A NEW form of instrument for castrating has been patented, which is very simple, and possesses many advantages over all existing castrators.

It has longitudinal grooves deeply cut, both on the upper and lower blades, which when closed fit accurately into each other, thereby squeezing the cord sufficiently to prevent hæmorrhage.

The upper and lower blades are curved, the former having a series of small sharp teeth, so that when in the act of closing the instrument, by means of these teeth it is impossible for the cord to slip, and it is cleanly cut and damped with the one action; it also has a very simple arrangement, whereby you can obtain parallel pressure throughout the whole length of the blades, this being a great advantage over all the instruments at present in use.

The upper blade having teeth will not blunt like the ordinary instruments.

It is nickel plated and fitted with a thumb screw, so that it can be taken to pieces for cleaning purposes. It has been patented and practically tested and proved to be the most simple and effective instrument as yet brought before the notice of the profession.

The patentees and manufacturers are Messrs. Arnold and Sons, of West Smithfield, London. Price, nickel plated, 38s. 6d.—*Communicated.*

Correspondence.

SOUTH AFRICAN HORSE-SICKNESS.

Colonial Bacteriological Institute,
Grahamstown, South Africa,
January 28th, 1896.

To the Editor of THE VETERINARY JOURNAL.

SIR,—In the January number of THE VETERINARY JOURNAL, there appears a paper by M. H. Hayes, F.R.C.V.S., on the above subject.

Captain Hayes has honoured me in abstracting large portions of my reports which have been sent to him by his special request. But in the paper under question, I would point out that an original remark made by him is not only erroneous but misleading, as regards the pathology of this interesting disease. I gave to this disease the name of Œdema mycosis in deference to the principal pathological feature, and in virtue of the fact that true inflammatory phenomena are conspicuously absent. Captain Hayes, in referring to the varieties, says :—"It is generally considered that there are three varieties, namely (I.) the lung form (Dutch : *paard zickte*), which is the common kind, and which we might term *specific equine pleuro-pneumonia.*" Now, sir, if there is one name which may not be used for this form, the one suggested by Captain Hayes is most assuredly so, for in this form inflammation is quite as much wanting as in any other. It might be termed specific pulmonary œdema, but as the local condition is only part of a general systemic condition, even this would be misleading. Should any of your readers be interested, I shall have much pleasure in sending a copy of my reports to them if they will kindly notify me to that effect.– I have the honour to be, Sir, faithfully yours,

ALEXANDER EDINGTON, M.B., F.R.S.E.,
Director.

To the Editor of THE VETERINARY JOURNAL.

Sandy Brow, Tarporley.
February 18th, 1896.

FRIEDBERGER AND FRÖHNER'S "PATHOLOGY."

SIR,—As an American translation of Friedberger and Fröhner's *Lehrbuch der speciellen Pathologie und Therapie der Hausthiere* has been offered on sale in England, I have the honour to inform you that the German publisher, Herr Ferdinand Euke, of Stuttgart, tells me that this American translation is unauthorised by him and is consequently a literary piracy, which he has taken measures to suppress in England. I regret to say that the American translator has made use, in his circular, of favourable opinions by English (and Scotch) veterinary surgeons, who probably would have been more careful in expressing their praise (and gratitude ?), had they been aware of the circumstances under which this illegal attempt to sell the American piracy had been made.

So far from this prohibition of the sale of the American translation of this most valuable work on veterinary medicine being a hardship to those English veterinary surgeons who are unacquainted with more languages than one, it will really be a boon ; because I have purchased from Herr Euke the right of translating the said work into English ; this purchase securing for my future readers the following advantages :

(1) My translation will be of the fourth and improved edition, which, Herr Euke tells me, will be ready early next month (March), and of which he is sending me the advance sheets.

(2) I shall furnish a commentary on the text, somewhat similar in method to the notes Cadiot, Reis, and Trasbot added to the French translation. Even if my annotations be not more valuable than those of the American translator, I shall have the undeniable advantage of help from several English veterinary surgeons, who have kindly promised to collaborate with me.

(3) The cost of the American translation was £2 10s. My translation will not be more than half that amount, and will therefore be well in reach of ordinary practitioners and students.

Your obedient servant,
M. H. HAYES, F.R.C.V.S.

Berwick-on-Tweed,
February, 1896.

On the 25th ult., I attended a Kerry cow which could not calve. She was from her size expected to have twins, but a great quantity of fluid had come away and now she was quite flat, but rather pendulous. She was two weeks over her time. Very little show of milk, very little relaxation of pelvic ligaments or enlargement of vulva. With some pressure I got hand and arm inserted, giving plenty of time and manipulation to enlarge and relax the pelvis and vagina.

As soon as I felt the calf sufficiently to determine its condition, I said it was deformed. The shepherd who was standing beside me, immediately told me that two other Kerries had cast calf and they were both malformations and both the same, and he described them, the description being identical with the case in utero; and now, February 12th, I have a note saying another of the Kerries has had a deformed calf similar to the previous ones; she calved it naturally.

In the case I had to do with, the round bullet head stuck fast in the vagina, so I had to divide the cranium longitudinally and let it collapse into less bulk. The cow died the third day.

I understand there is some relationship between the cows and the bull they were served with. I also understand that in some sheep stocks where in-breeding is practised, there are deformed lambs to a greater extent than ordinary. It would be interesting to know if there are other records or knowledge of similar cases to this in other pure-bred bovine herds.

It belonged to the class of Symelian monstrosities, where from absence of some parts and fusion of others a creature was developed, having in this case a head big, out of all proportion to the size of the trunk. Limbs short as fins, the posterior ones appearing to grow out from the back. Yours, etc.,

JOHN CAMERON.

OWING to pressure on our space, we are compelled to hold over "Extracts from Foreign Journals," etc., until the next issue.

Communications, Books, Journals, etc., Received.

Recueil de Médecine Vétérinaire (Alfort); La Presse Vétérinaire (Paris); Bulletin de la Societe Centrale de Medicine Veterinaire (4me trimestre 1895: Paris); Le Bulletin Veterinaire (Orleans); L'Echo Vétérinaire (Liége); Annales de Médecine Vétérinaire (Brussels); Berliner Thierärztliche Wochenschrift (Berlin: Richard Schoetz); Oesterreichische Monatsschrift für Thierheilkunde (Vienna: M. Perles); La Revista Veterinaria (Buenos Aires); La Revista Agronomica (La Plata); La Clinica Veterinaria (Milan); Il Nuovo Ercolani (Pisa).